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MONTHLY REPORT

OF THE

DEPARTMENT OF AGRICULTURE

FOR

AUGUST AND SEPTEMBER,

1871.

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1871.

MONTHLY REPORT.

DEPARTMENT OF AGRICULTURE, STATISTICAL DIVISION,
Washington, D. C., September 15, 1871.

SIR: I present herewith for publication a digest of the reports of August and September upon the condition of the harvested and the growing crops of the country, with brief notes from statistical reporters in relation thereto; also a variety of extracts from the communications of regular correspondents; articles on the British imports of wheat and cotton; sugar and molasses crops of Cuba for 1870-'71; the "Fultz" wheat; notice of meeting of the American Pomological Society; a list of sales of short-horn stock; a mention of personal observations in Colorado and Wyoming; statistics of live stock, and of flax production in Ireland; together with an entomological record, scientific notes, and a variety of industrial data; a list of fairs for 1870; market prices of farm products in August and September; meteorological tables and notes, &c., &c.

Very respectfully,

J. R. DODGE,
Statistician.

Hon. FREDERICK WATTS,
Commissioner.

CONDITION OF CROPS.

Great unevenness, meteorological and statistical, appears in the present returns. The most encouraging and very unpromising indications are presented from the same State, and often from the same district. Changes in the tenor of returns of the same county from month to month have sometimes been necessary.

The New England States have had generally a good supply of rain, with storms of hail, high winds, and at several points a hint of earthquakes. July was unusually cold; August generally warmer than an average temperature for that month. At Cooperstown, N. Y., there was frost on the 24th of July, and at several points in the same State the month was recorded as the coolest for several years; while the August temperature was exceptionally high. The rain-fall was large during both months, particularly in August on the sea-coast. Abundant moisture, somewhat unevenly distributed in point of space and time, was enjoyed in New Jersey and Pennsylvania. In portions of the Atlantic coast, from Delaware to Georgia, drought was suffered, broken at last by heavy rains; and the season in that district has been marked by extremes of temperature, the occurrence of cyclones, and other dis-

turbances of a meteorological equilibrium. Tennessee has enjoyed very seasonable weather; the Gulf States have in places suffered somewhat from absence of rain, and parts of Texas have endured a severe drought and high temperature. Portions of Michigan and of Illinois have been parched with drought. Iowa and Missouri have reported a sufficient rain-fall in most localities; and "droughty" Kansas has been moister than ever—the meteorologist of Council Grove reporting for the season "over eighty days of clouds obscuring sun's rays, and more rain than in any July in ten years, except 1867." Eight of the thirteen Kansas stations reported from six to eight inches of rain in July. Nebraska had less moisture.

CORN.

The condition of corn, as reported in the August returns, was high, except in the Southern States; and the reports of September are equally favorable in the Eastern and Middle States, still more encouraging in the States beyond the Mississippi and Missouri, and somewhat less so in the States of the Ohio Valley. Those below an average in the great corn-producing district are: Kentucky, 85 per cent.; Ohio, 98; Michigan, 93; Indiana, 97; Illinois, 95. Those above an average: Wisconsin, 109; Minnesota, 108; Iowa, 113; Missouri, 108; Kansas, 115; Nebraska, 112.

The noticeable local facts affecting this crop will be given in brief detail. In several counties in Maine, grasshoppers have wrought some injury. The crop is somewhat later than usual in some parts of Vermont. In New Hampshire, Massachusetts, Rhode Island, and Connecticut the crop will be large.

In Niagara County, New York, some fields have been nearly ruined by a season of dry weather, said to be unexampled in thirty years. Depreciation from a similar cause exists in Steuben, where much has been cut up for fodder; and also in Erie. In Hunterdon County, New Jersey, a loss of one-half by "the white grub" is reported, and worms have been injurious in Warren. Reports are quite favorable from Pennsylvania, with few exceptions, as in the cases of early planting on heavy, wet soils, and late planting on lighter lands subject to drought.

Cumberland County, Pa.—The crop is very flourishing in the eastern part of the county, but not so heavy in the western.

Warren County, Pa.—July and August much too dry for this crop.

Chester County, Pa.—Those fields not seriously injured by the cold, wet spring, and by birds and worms, will give a heavy yield. Many fields have only half a set.

Mifflin County, Pa.—Will be a very large crop if not injured by frost.

The prospect has brightened in Maryland during the past month, and an average crop will be gathered. On the Chesapeake it is ripening earlier than usual. In Virginia, a very fine prospect is reported from Princess Anne, Nansemond, Henrico, and Surry, while drought is materially shortening the crop in Nelson, Buckingham, Madison, Amelia, Pulaski, Bath, Highland, Louisa, Rappahannock, and Augusta.

Montgomery County, Va.—The crop was terribly injured by drought, but has improved beyond expectation.

King George County, Va.—Unusually abundant in the upper section of the county, but suffered for want of rain in the eastern section. In favored portions the yield is 50 per cent. above that of last year.

The crop of North Carolina will be diminished somewhat by drought, though several counties claim a prospect for more than an average yield.

Mecklenburg County, N. C.—About half a crop on upland. No rain for ten weeks sufficient to wet the ground for plowing.

Hertford County, N. C.—The late rains have greatly improved the corn crop, and the yield will probably be better than at any time since 1865.

Franklin County, N. C.—Though the yield per acre will be short, the increased acreage will insure enough for home consumption.

Gaston County, N. C.—Promised well until August; after which, on account of the dry weather, it fell off rapidly. Droughts in July and August always prove fatal to crops on the high lands of this county.

Caswell County, N. C.—Fully equal to the crop of last year, notwithstanding the drought from the 15th of June to the latter part of July.

In Ashe County the crop has been seriously injured by a violent storm. Similar accounts of drought come from South Carolina, with statements indicating considerable amelioration from recent rains.

Fairfield County, S. C.—The early planting matured prior to the drought. The last planting is almost entirely destroyed.

Union County, S. C.—Late crop injured one-half by drought. Early corn, well cultivated, is good.

Horry County, S. C.—Reduced by drought, but the crop will be somewhat above that of last year.

Losses in several counties in Georgia have resulted from severe storms, yet a greater injury has been caused by drought.

Hancock County, Ga.—Late and lowland corn cut short by drought, following the excessive rains of spring and early summer.

Clay County, Ga.—Sufficient corn has been made to supply the wants of this section. There is a growing disposition to gather hay, raise hogs, cattle, and sheep, and to make the farm self-sustaining.

Butts County, Ga.—On bottom land, inferior—too much rain; that on upland is sufficiently good to compensate for loss on the bottoms, making together an average crop.

In the bottom lands which were not too wet in spring a good crop is assured; on uplands not retentive of moisture corn will be light. In Marshall County, "nearly one-fourth of the crop will be lost by being blown down during the rains of the last month." In Mississippi the crop has improved since last month, though local depreciation is reported at several points, the injury being caused by rain in one place and drought in another. The principal injury of the crop of Florida was wrought by the cyclone of August 17 and 18.

Levy County, Fla.—Crop harvested, but badly injured by the storm.

Nassau County, Fla.—Whole valley of the St. Mary inundated by the successive gales, with heavy rains, and crops are utterly ruined in most places.

The reports of injury from drought in Texas are more numerous than elsewhere. Some counties will still have a surplus, while others will scarcely be able to supply the home consumption.

Uvalde County, Texas.—Fully matured. Average on irrigated lands, 35 bushels per acre; fields not irrigated, 10 bushels; quality inferior.

Kendall County, Texas.—Yield hardly 8 bushels per acre. Cause, the unprecedented dry season.

Coryell County, Texas.—Cut short one-half by drought. Not a drop of rain for thirteen weeks.

Williamson County, Texas.—Injured by drought. No rain from 12th of May to 16th of August.

Colorado County, Texas.—A full average, though the drought cut off late planted corn. The increased acreage makes up the average.

A full average will be realized in Arkansas, notwithstanding the dry weather of August. In the vicinity of Independence, "the large yield, with the increase of acreage, promises an abundance which has had no equal since North Arkansas has been settled." It is stated that very little corn will be needed for fattening hogs, as "the forest trees are breaking with their load of mast." The middle and eastern counties of Tennessee have had a very dry season, which has reduced the yield of corn. That which was planted early in deep soil is heavy, while fields planted after the middle of May are, in many places, of little value. In

Fayette County, while the drought has pinched the ears and reduced the size of the grains, the best crop gathered since the war is expected.

Complaint of injury from dry weather comes from the southern portion of West Virginia. In many fields the stalks were dry before the ears were half filled. Injury from the same cause has resulted throughout a large portion of Kentucky. The lighter uplands in Ohio have been too dry, and the crop in some places will be much reduced.

Morrow County, Ohio.—Drought severely affected the corn; many fields cut to save the fodder.

Franklin County, Ohio.—Drought, in the south half of the county, cut short the corn 50 per cent.; in the north half, the low, black lands return an excellent crop; the uplands 25 per cent. short.

Scioto County, Ohio.—Drought caught our splendid corn crop just as it was shooting, and cut it down 25 per cent. below last report.

Mercer County, Ohio.—Chinch-bug injuring corn in some localities.

Notwithstanding the depreciation in certain soils and districts, the crop of Ohio will not be much below an average. In Michigan the loss is greater. Some fields have been cut up for fodder. Yet there are counties which report a larger yield than ever before. Portions of Indiana have been very dry, but recent rains have greatly improved the crop. In Putnam it is said that "corn has matured beyond expectation in spite of the drought, and will yield a full average;" in Dubois it was "never better;" in La Grange, though the large expectation at first entertained has been reduced 25 per cent., an average quantity is still expected. An immense yield was anticipated in Illinois prior to numerous local drawbacks, from drought, hail-storms, and chinch-bugs. The report from Lake—"the promise of a prodigious yield has subsided into an average crop"—is not far from a fair summary of the entire returns. The crop will be large in Missouri.

Audrain County, Mo.—Ten days ago there was promise of the heaviest corn crop ever produced in the county; chinch-bugs have since cut it down to an average.

Monroe County, Mo.—Corn injured by the chinch-bug, yet the crop is larger than for six years.

Bates County, Mo.—Corn crop has not been so good for ten years as now. The average for the county will be 60 bushels.

Linn County, Mo.—Chinch-bugs, a new swarm, have for twenty-five days been wasting the corn crop; otherwise it would have been 40 or 50 per cent. larger than usual.

Harrison County, Mo.—Corn maturing well, though somewhat injured by chinch and grub worm.

Mercer County, Mo.—Corn crop better than we ever had before.

Schuyler County, Mo.—In spite of drought, corn will be above an average.

Wisconsin and Minnesota have large crops: There has been some injury from drought in the former State, but no reports of depreciation from this cause have come from the latter.

Blue Earth County, Minn.—Corn splendid; out of the way of frost; a hail-storm destroyed 767 acres of corn.

Winona County, Minn.—Corn mostly cut up and out of the way of frost.

In Iowa, Kansas, and Nebraska a considerable increase in quantity is assured. The following items are specimens of the returns:

Washington County, Iowa.—Corn magnificent; one field, by actual count, averaged four ears to the hill.

Clinton County, Iowa.—Corn crop made; the best for ten years.

Appanoose County, Iowa.—Corn, though materially injured by chinch, will exceed last year's crop.

Boone County, Iowa.—Farmers lamenting the low price of corn, caused by its superabundance.

Carroll County, Iowa.—Corn not filling out well; heavy wind-storms have loosened the roots.

Hardin County, Iowa.—Corn heavy and far advanced; nearly out of danger from frost.

Jasper County, Iowa.—Corn crop the best in sixteen years, and out of danger from frost; saw a load of new corn in market to-day.

Douglas County, Kansas.—Corn two weeks earlier than usual. It is already being cut.

Shawnee County, Kansas.—Corn will be a heavy crop.

Republic County, Kansas.—Chinch-bugs thick on corn; also a great deal of smut, which old farmers here say is a sign of a good crop.

Jackson County, Kansas.—Corn may make heavy yield in spite of the chinch.

Atchison County, Kansas.—Corn crop will be a third less than was anticipated.

Neosho County, Kansas.—Corn remarkably forward and good; will probably average 50 bushels per acre.

Butler County, Kansas.—Corn crop better than ever known.

Howard County, Kansas.—Corn could not be better.

WHEAT.

The wheat report is far less favorable than the returns of spring and early summer, except as far as relates to the Eastern and Middle States. The condition of wheat at the time of harvesting is thus stated: Above an average—New Hampshire, 104; Massachusetts, 101; New York, 102; New Jersey, 110; Pennsylvania, 107; Maryland, 102; Michigan, 106. Below an average—Maine, 95; Vermont, 99; Delaware, 97; Virginia, 79; North Carolina, 59; South Carolina, 53; Georgia, 52; Alabama, 65; Mississippi, 94; Texas, 84; Arkansas, 70; Tennessee, 70; West Virginia, 94; Kentucky, 65; Missouri, 97; Illinois, 92; Indiana, 91; Ohio, 99; Wisconsin, 94; Minnesota, 80; Iowa, 90; Kansas, 98; Nebraska, 80; California, 75; Oregon, 95.

The amount grown in the South is small, and low condition there will affect the supply but little. The depreciation is about 10 per cent. in the West, which will be partially offset by increase of area.

The proportion of counties, in this section, in which the condition of the crop is above an average, may be understood from an analysis of 160 returns, as follows:

	Over 100.	At 100.	Under 100.
Ohio	14	22	10
Indiana	7	14	19
Illinois	13	13	23
Iowa	7	19	18

The following items from crop reports indicate some of the local aspects of these returns:

Penobscot County, Me.—Dry weather has injured the crop.

Somerset County, Me.—Average not more than 15 bushels per acre.

Androscoggin County, Me.—In good condition as to quality, but little sown, and injured by grasshoppers.

Oxford County, Me.—Generally of good quality, sometimes pinched by drought.

Sagadahoc County, Me.—Considerably injured by drought and grasshoppers.

Orange County, Vt.—A good crop.

Caledonia County, Vt.—Light growth, but well filled.

Otsego County, N. Y.—Very fine crop, but injured in harvesting by rains.

Washington County, N. Y.—Quality of spring wheat injured by heavy rains.

Livingston County, N. Y.—The crop turns out better than was expected. Have not seen a poor piece in the county this season.

Seneca County, N. Y.—Never had such a yield, and the quality is fine.

Burlington County, N. J.—A good yield. On a field of thirteen acres 412 bushels were raised, and several farmers report over 30 bushels to the acre.

Union County, N. J.—The crop was never better.

Cumberland County, N. J.—The quality is better than last year, when it was below the average.

Lancaster County, Pa.—The harvest was earlier than ever known, and the yield is large.

Westmoreland County, Pa.—Quality uniformly superior.

Luzerne County, Pa.—A larger yield per acre than for many years.

Berks County, Pa.—A larger yield per acre than last year, and of the very best quality.

Armstrong County, Pa.—Plump and heavy, and good bulk of straw, which will be used as fodder.

Northumberland County, Pa.—Yield better than that of 1870. Berry plump and of superior quality.

Mifflin County, Pa.—Better than ever before. A new variety, called Fultz, has been yielding from 30 to 45 bushels per acre.

Clearfield County, Pa.—Much superior to the yield of past seasons, and quality good.

Prince George's County, Md.—A poor crop—not well filled.

Worcester County, Md.—On white clay soil the best crop in twenty years, but on the seaside almost wholly destroyed by rust.

Washington County, Md.—Much over an average crop.

Nansemond County, Va.—More than an average yield was expected, but on being thrashed it fell short surprisingly.

Nelson County, Va.—Quality very fair, but yield light, falling below the estimates made before harvest, in most cases.

Mecklenburgh County, Va.—Almost an entire failure. Many pieces scarcely returned seed.

King William County, Va.—A lamentable failure.

Orange County, Va.—Quality fine, but yield much less than was expected.

Middlesex County, Va.—Not over half a crop, on account of rust.

Amelia County, Va.—Very nearly a failure; the best yield is five bushels for one of seed. Drought has greatly injured crops generally.

Pulaski County, Va.—Thin, and does not yield well in proportion to straw.

Louisa County, Va.—Not more than half an average crop.

Surry County, Va.—Small area planted; crop good.

Augusta County, Va.—Injured by the fly. The stand at harvest was very thin, but the berry is plump and heavy.

Mecklenburgh County, N. C.—Average yield not over 3 bushels to the acre. Quality poor. Weight about 50 pounds.

Person County, N. C.—Crop much injured by rust. Average yield, 3 bushels to the acre.

Hertford County, N. C.—Greatly injured by rust. Yield will not average more than 5 bushels to the acre.

Tyrell County, N. C.—Wheat culture abandoned in this county on account of the rust.

Currituck County, N. C.—Badly damaged by rust. But little grown in the county.

Gaston County, N. C.—The crop is an utter failure.

Davie County, N. C.—About half a crop in a portion of the county, and three-fourths in the other portion.

Lenoir County, N. C.—Damaged seriously by rust.

Caswell County, N. C.—The most inferior crop for twenty years. Rust. Not over 3 bushels per acre.

Stokes County, N. C.—Three bushels per acre. Rust.

Perquimons County, N. C.—Almost a dead failure. 3½ to 4 bushels to the acre.

Camden County, N. C.—The crop in this and adjoining counties has been almost abandoned, owing to the red rust. The best yield, 8 bushels per acre, from Pennsylvania red wheat. Average, from ordinary seed, 2 to 3 bushels.

Yadkin County, N. C.—Yield, 4 to 5 bushels. Badly injured by rust.

Randolph County, N. C.—Lightest crop since 1850. Average, 4 bushels per acre.

Burke County, N. C.—Not more than half a crop. On our rich bottom-lands wheat was almost an entire failure.

Stanly County, N. C.—Average does not exceed 3 bushels per acre. Late wheat suffered most. We have a red-wheat here, called spring-wheat, but which has to be sown in the fall, that generally succeeds when other varieties fail, on account, it is thought, of its having bloomed when the rainy season has fairly set in. The great desideratum among wheat-growers in this section is a very early wheat that will meet the alterations of the seasons.

Alleghany County, N. C.—Wheat was thin on the ground, but good in the head. Average yield, 5 to 8 bushels.

Wake County, N. C.—Hardly half an average crop, and very inferior in quality.

Orangeburgh County, S. C.—Rust prevailed generally. Average yield not more than 3½ bushels.

York County, S. C.—Very poor crop in quality and quantity.

Chester County, S. C.—Complete failure. Rust. Yield about equal to the seed planted.

Spartanburgh County, S. C.—Quality inferior. Many farmers made less than they sowed.

Clayton County, Ga.—Rust reduced the crop to an average of 3 bushels per acre.

Melton County, Ga.—Almost a total failure. 1½ bushels to the acre, and that inferior.

Jackson County, Ga.—Almost an entire failure. What was made is so small and withered that the yield of flour is small.

Gwinnett County, Ga.—A failure. Average yield will not exceed 2½ bushels.

Forsyth County, Ga.—Average yield this year about 2 bushels. Usual product about 7 bushels.

Murray County, Ga.—Yield about three pecks to the acre, and that almost worthless. The heads did not average more than three to five grains, and these were injured by rust.

Chattooga County, Ga.—So much injured by rust that a great deal that was sown was not harvested. Yield not over 2 bushels per acre, on an average.

Madison County, Ga.—Average yield about 3 bushels; quality very inferior.

Lawrence County, Ala.—Almost a failure. Bad culture and rust.

Etowah County, Ala.—Nearly a complete failure. Average not over 3 bushels per acre.

Rankin County, Miss.—Little wheat sown last fall, which was so badly rusted that none was gathered.

Red River County, Texas.—Previous to 1865 the average yield of wheat was 16 bushels. Since that time about 10 bushels, owing to the increase of rain and cold weather in March and April.

Bandera County, Texas.—Spring-wheat a failure, owing to the drought during the summer months. Winter-wheat averaged about 10 bushels to the acre; about one-half the yield in a favorable season with good cultivation.

Columbia County, Ark—Crop unusually poor; average per acre not over 5 bushels. Many fields were not cut at all.

Montgomery County, Ark.—Yield will not average more than 5 bushels per acre. Worse than ever before.

Independence County, Ark.—Average less than 5 bushels, and the quality very inferior. Rust attacked every field in the county.

Newton County, Ark.—A failure throughout the county.

Stewart County, Tenn.—About one-third of an average crop. Some crops barely returned the seed.

Montgomery County, Tenn.—Scarcely 2½ bushels to the acre. It scarcely looks like wheat. We are importing our seed-wheat and flour also to some extent.

Campbell County, Tenn.—Crop damaged by late frost, rust, and the fly.

Greene County, Tenn.—Some fields not cut at all; very few crops of average yield; not more than 4 bushels harvested to the acre, on an average.

Humphreys County, Tenn.—Many fields ruined by rust. Late sowing and the imperfect manner in which it is put in are considered causes of the poor crops.

Lauderdale County, Tenn.—Will not average more than 3 bushels per acre, owing to rust, which is almost sure to damage late-sown wheat.

Nichols County, W. Va.—Wheat, half a crop; injured by fly and rust. The new variety of German wheat sent by the Department was damaged by rust and weevil. Tappahannock does best, maturing before the time for rust or insects.

Tyler County, W. Va.—Wheat, average yield greatly reduced by frost, fly, and rust; many fields, however, above the usual average.

Hart County, Ky.—Wheat crop light; many large farmers did not cut any. Rye yielded better in straw than grain.

Henry County, Ky.—Wheat yield has fallen short of expectations; crops estimated at 12 and 15 bushels yield but half that amount.

Carroll County, Ky.—The frost of April greatly injured wheat on the low lands on the Ohio and Kentucky Rivers. Crops on the high lands not injured, but the falling off on the river crops makes the average low, perhaps 12 bushels to the acre.

St. Joseph County, Mo.—Wheat averages 20 bushels, ranging from 8 to 43.

Monroe County, Mo.—Wheat more or less injured by chinch, yet more wheat has been raised than during any former year of the last six.

Worth County, Mo.—Wheat averages, per acre, not over 8 bushels. Spring-wheat will not return the seed, while winter-wheat averages 12 bushels. The failure of spring-wheat directed general attention to buckwheat.

Holt County, Mo.—Spring-wheat will average 15 bushels, and winter wheat 17 bushels per acre.

Clinton County, Mo.—Winter-wheat averages 15 bushels per acre; spring-wheat nearly all destroyed by chinch-bugs; will not average over 2 bushels.

Miller County, Mo.—Tappahannock wheat will average 20 bushels, and other varieties 12 bushels per acre.

Cole County, Mo.—Wheat average less than 15 bushels per acre. Tappahannock, (received from the Department,) 20 bushels, in good ground. Quality of the crops 30 per cent. above average.

Schuyler County, Mo.—Winter-wheat averages 15 bushels; spring-wheat completely destroyed by chinch.

Grundy County, Ill.—Spring-wheat almost totally destroyed; not one-twentieth of the area planted was harvested. Winter-wheat but little raised; average 25 bushels per acre.

Boone County, Ill.—Wheat averages 11 bushels; crops cut down by chinch-bugs, in the northern part of the county, to 5 bushels.

Schuyler County, Ill.—Spring-wheat destroyed by chinch; winter-wheat averages 19 bushels; some crops average 41 bushels.

Tazewell County, Ill.—Winter-wheat averages 20 bushels per acre.

Sangamon County, Ill.—Spring-wheat a failure; winter-wheat, 23 bushels per acre.

Marshall County, Ill.—Spring-wheat almost a failure; but one-third of the area planted was harvested; winter-wheat averages 22 bushels.

Pulaski County, Ill.—Though some fields reach an average of 20 and 30 bushels, the imperfect modes of culture bring down the general average to 10.

Fulton County, Ill.—Winter-wheat, the first I have seen in thirty-six years' farming in Illinois, averaged 30 bushels, ranging from 25 to 40. Spring-wheat will not return the seed. Winter will hereafter be sown more extensively.

Pike County, Ill.—Wheat averages 14 bushels, with very heavy straw; best varieties Walker, Genesee, Gold Drop, and Mediterranean. The White and Red May, Blue Stem, and Tappahannock did not do so well. More smut than I ever saw before.

Peoria County, Ill.—Spring-wheat eaten by chinch. Winter-wheat but little sown, but of excellent yield; averages of 22 bushels reported.

Hancock County, Ill.—Wheat averages 22 bushels, single fields being reported as high as 38, and very few below 20 bushels. Spring-wheat eaten by chinch. Rye averages considerably less than winter-wheat.

Steuben County, Ind.—Yield in timber-land, 30 bushels per acre; partial prairie, 20 bushels per acre; harvested in fine condition, and more has been raised in the county than ever before, the acreage having been largely increased.

Madison County, Ind.—Wheat averages 9 bushels; injured by rust and fly.

Ripley County, Ind.—Wheat turning out badly; injured by rust.

Cass County, Ind.—I have just thrashed out of Tappahannock, 21 bushels per acre, weighing 61 pounds per bushel.

Carroll County, Ind.—Rust, fly, and bad weather have cut down the wheat average to 10 bushels.

Harrison County, Ind.—Wheat averages not over 5 bushels; quality inferior.

Morrow County, Ohio.—Wheat averages 12 bushels; 50 per cent. below anticipations; some fields injured by frost; quality inferior.

Vinton County Ohio.—Wheat averages this year 7 bushels; general average, 10; injured by rust and fly.

Hardin County, Ohio.—Wheat averages 12 bushels; grain shrunk and lighter than last year.

Ashland County, Ohio.—Wheat crop averages 18 bushels; very good quality.

Calhoun County, Mich.—Wheat yield per acre varies. One field of Tappahannock yielded 40 bushels per acre, and a neighboring field of Diehl, 34. General average about 20 bushels, as sound as was ever made into flour. Chief varieties, Diehl, Treadwell, and Tappahannock.

Shiawassee County, Mich.—Yield of wheat greater than usual, averaging 25 bushels; some fields 40 bushels.

Newaygo County, Mich.—Wheat, in spite of frost, more than an average crop; averaging 17 bushels per acre; quality unusually good; weighs 64½ pounds per bushel.

Mecosta County, Mich.—Winter-wheat better than usual; some fields not affected by frost; average 40 bushels.

Washington County, Wis.—Club-wheat a failure, ranging from 7 to 12 bushels per acre. It is the main crop of the county. Rio Grande and Mammoth are plump and of good color, ranging from 14 to 21 bushels per acre; winter-wheat yields from 18 to 30 bushels, but there is but little sown.

Jackson County, Wis.—Spring-wheat will average 8 bushels; winter, 15; average reduced by extreme drought in May and June.

Sherburne County, Minn.—Wheat crop suffered from drought, but late rains have benefited it; quality good; housed in good condition.

Washington County, Iowa.—Wheat averages 20 bushels; quality fine; housed in good order with favorable weather.

Tama County, Iowa.—Wheat averages 11 bushels; quality good; price at the station, 85 to 90 cents.

Dubuque County, Iowa.—Wheat averages 15 bushels; my crop of white Michigan, 25 bushels.

Allamakee County, Iowa.—Spring-wheat averages 13 bushels; winter-wheat 17; quality better than for many years, weighing 60 pounds per bushel.

Appanoose County, Iowa.—Wheat crop a failure; 95 per cent. of it spring-wheat, of which I cannot hear of a single bushel saved from the chinch-bugs.

Shelby County, Iowa.—About a quarter of the wheat crop has been thrashed, showing an average of 11½ bushels.

Hancock County, Iowa.—Wheat never better in quality, but below average in quan-

tity; average yield not over 10 bushels per acre. This is our second light crop and worse than last year; crop injured by drought.

Labette County, Kans.—Wheat averages 15 bushels; rye 16; chinch nearly destroyed the late wheat, greatly reducing our usual average. They swept many fields of everything green.

Wilson County, Kans.—Average yield of wheat 18 bushels. A field of "Red Sea" yielded 28¾ per acre. An unknown variety is reported as yielding an average of 40.

Anderson County, Kans.—May-wheat averages 8 bushels; nearly run out from long use; Lancaster 20; white-wheat 22. All new varieties have done well.

Cloud County, Kans.—Fall-wheat very fine; average yield 27½ bushels, in some cases reaching 54 bushels. Spring-wheat below average.

Linn County, Kans.—Wheat will average 12 bushels in spite of chinch.

Jefferson County, Kans.—Average yield of wheat less than was expected from the growth of straw; average about 18 bushels, some crops reaching 42 bushels; weight per bushel unusually heavy.

Washington County, Kans.—Spring-wheat falls far short of the average, but winter-wheat is good, and, on the whole, the crop is about an average one. The chinch-bug damaged the spring-wheat.

Dakota County, Nebr.—Wheat averages 18 bushels; quality superior.

Nemeha County, Nebr.—Winter-wheat will average 24 bushels; spring-wheat nearly destroyed by chinch; will not average over three bushels.

Cuming County, Nebr.—Wheat averages 8 bushels; the lightest crop ever raised here; injured by rust.

Dixon County, Nebr.—Wheat crop very bad; many fields not cut; others mowed for fodder; cause of this failure, drought. Arnautka spring-wheat did well.

Johnson County, Nebr.—Spring-wheat amounts to almost nothing, in consequence of the depredations of the chinch. Some fields entirely destroyed; others yield 2 bushels, and the best fields but 12 bushels per acre. What little winter-wheat was sown did well. Hereafter but little spring-wheat will be sown, most of our farmers intending to sow the fall-wheat.

Del Norte County, Cal.—Wheat averages 20 bushels.

Lake County, Cal.—Wheat-thrashing two weeks later than last year; quantity and quality better than was expected.

San Joaquin County, Cal.—Not one acre in twenty cultivated in wheat produced 5 bushels. River bottoms that had been flooded produced from 15 to 16 bushels, thus demonstrating the necessity of irrigation.

Colusa County, Cal.—Wheat almost a total failure, except in a small area in the upper end of the county.

Stanislaus County, Cal.—I have heard from every thrashing-machine in the county, and find the amount of wheat threshed to be 210,565 bushels—about one bushel to each acre planted. Of barley, 90,251 bushels. Our thrashing-machine has just finished thrashing 24,000 bushels of wheat in Tuolumne County, where none has heretofore been raised.

Lane County, Oreg.—Wheat averages about 22 bushels; county capable of much better yield with high cultivation.

Marion County, Oreg.—Winter-wheat will average 25 bushels; spring-wheat, sowed before the long rain of April, about the same; that sowed afterwards is scarcely worth harvesting. Straw short, but heads long and beautiful.

Conejos County, Colo.—Wheat not harvested; grasshoppers have done great mischief to the crops.

Beaver County, Utah.—Yield of wheat decreased, as also that of barley, by ravages of grasshoppers.

Kane County, Utah.—Wheat destroyed to a great extent by birds, especially by a striped-headed sparrow.

Salt Lake County, Utah.—Average yield of wheat 28½ bushels; no grasshoppers yet.

Tooele County, Utah.—Wheat averages 30 bushels.

Ada County, Idaho.—Wheat averages, probably, 15 bushels. Season the most unfavorable since the settlement of the Territory; sudden and annoying extremes of temperature, and great dryness.

Gallatin County, Mont.—Wheat averages 25 bushels; unusually large.

Choctaw Nation, Indian Ter.—Wheat averages 15 bushels; very little sown.

OATS.

The oats crop is not a full one, though the deficiency will be small. The States reporting an average crop are New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, Mississippi, Wisconsin, Iowa. The depreciation, as represented by the last reports, amounts to 18 per cent. in New Jersey, 8 in Pennsylvania, 8 in West Virginia, 4 in

Kentucky, 10 in Missouri, 5 in Illinois, 4 in Indiana, 5 in Minnesota, 3 in Kansas, 14 in Nebraska, 20 in California, and 10 in Oregon. A small yield on a small area is generally reported in the South.

Chesterfield County, S. C.—A failure; not yielding the amount of seed planted.
Jackson County, Ga.—Spring-sown crop entirely destroyed by rust. Fall-sown, good, when not killed out by hard weather in the winter.
Kendall County, Texas.—What little oats were planted did well.
Marshall County, W. Va.—Oats will probably average 45 bushels; the largest crop ever raised.
Shelby County, Ky.—Oats average 38 bushels.
Hardin County, Tenn.—Below average; damaged by rust before harvesting.
Vernon County, Mo.—Chinch-bugs have nearly ruined the oats crop; average yield 10.6 bushels.
St. Francois County, Mo.—Oats deficient in quantity, but of good quality.
New Madrid County, Mo.—Short crop, owing to cold, wet weather at seeding time.
Livingston County, Ill.—Oats have thrashed out from 35 to 40 bushels per acre.
Lake County, Ill.—Oats yield good; crops will average 45 bushels.
Cass County, Ind.—Swedish oats the favorite variety; it yields 30 bushels of 40 pounds each per acre. Black Norway yields 40 bushels of 30 pounds each.
Richland County, Ohio.—Oats will average 40 bushels; one field, perhaps, 75 bushels per acre.
Van Buren County, Mich.—Oats turned out better than was expected during the drought. Later rains have made the heads fill out well on short straw.
Clinton County, Mich.—Oats, in spite of drought, reach their usual average of 40 bushels.
Mecosta County, Mich.—Oats thrash out better than was expected.
Green County, Wis.—The oats crop of this year was never excelled; average yield, 50 bushels per acre.
Fillmore County, Minn.—Oats heavier than last year.
Greene County, Iowa.—Common white oats a full crop; Norway and Surprise, rather failures.
Franklin County, Iowa.—Oats will average from 50 to 60 bushels. My oats thrashed out 70. Varieties, Black and Surprise.
Osage County, Kans.—Oats light, on account of chinch.
Curry County, Oreg.—Late-sown oats badly rusted; early sown, bright and sound.
Marion County, Oreg.—Oats sown after the April rain scarcely worth harvesting.
Beaver County, Utah.—Grasshoppers and hares have cut down the oats crop.

OTHER GRAINS.

Barley is generally reported in condition below an average, except in a few of the States. Among the most favored are New York, Ohio, Indiana, and Wisconsin.

Buckwheat will also be less in quantity than usual. The Western States promising full supplies are Wisconsin, Iowa, Nebraska, and Kansas. An average depreciation of 10 per cent. may be expected.

Rye is in nearly average condition, the heaviest depreciation being in the South.

Penobscot County, Me.—Barley injured by dry weather.
Androscoggin County, Me.—Barley ruined by grasshoppers.
Oxford County, Me.—But little rye sown; condition good. Barley good.
Caledonia County, Vt.—Barley good.
Columbia County, N. Y.—Barley is shorter in head than usual. A large quantity of rye was sown in August.
Washington County, N. Y.—Rye was much of it sprouted before being housed.
Seneca County, N. Y.—Many pieces are yielding 50 bushels per acre of barley.
Sussex County, N. J.—Rye excellent.
King George County, Va.—Rye is a light crop.
Androscoggin County, Me.—Buckwheat did not fill.
Columbia County, N. Y.—A large quantity of buckwheat was sown in the eastern portion of the county, and promises a large yield.
Northumberland County, Pa.—Early sown buckwheat is not so good as that sown late in July.
Highland County, Va.—Not over one-fourth of an average crop of buckwheat expected. Crop blasted.

COTTON.

No cotton crop reports purporting to have come from the Department of Agriculture during the past month have been genuine. The items n circulation, often contradictory in tenor, assumed to be official, have had no origin in the statistical data of this office.* The returns of August and September include reports from about four hundred cotton-growing counties, representing a very large proportion of the cotton area. Those for August point to an average condition of the crop, almost identical with that of the preceding report, the averages for Alabama and Mississippi being the same; those of Louisiana, Arkansas, and Tennessee being higher, and those of the other cotton States being lower. The State averages of the September report are somewhat lower than those of August, though the principal depreciation occurs in States which yield a small proportion of the crop, while the reduction is slight in the district represented by the States of Georgia, Alabama, Mississippi, and Louisiana. The percentage of full condition, as averaged from all attainable data, is thus stated: North Carolina, 82; South Carolina, 80; Georgia, 78; Florida, 75; Alabama, 80; Mississippi, 80; Louisiana, 77; Texas, 80; Arkansas, 95; Tennessee, 96.

There are reports of injuries by the boll-worm and caterpillar, mainly in Mississippi and Louisiana, but no evidence that a general or very serious loss from insects is probable. Rust is common in the Atlantic States, and to some extent on the Gulf coast. Drought has been injurious in the Carolinas and in Texas, though the reports of rain-fall through the South indicate a fair supply of moisture, the distribution of which has been somewhat more unequal than usual. At one point in Georgia the fall in August was nearly fourteen inches, and in parts of Florida it amounted to twenty-three inches. These variable atmospheric conditions have increased the prevalence of rust, and caused the destruction both of leaves and fruit. These drawbacks, though greater than those reported in September of last year, are not sufficiently serious to excite apprehensions of a greatly depreciated yield. They are reported each year in some portions of the cotton area. In the record of last year there was "considerable complaint of damage to the cotton crop from rust, worms, and unfavorable August weather."

These facts do not point to an enlargement of the expectation hitherto indulged. If they are reliable, the most favorable season could scarcely bring a crop exceeding three and one-third millions of bales; if the growing season should be short or unfavorable, three millions would be a good result. With the combination of unfavorable circumstances, the product might be still further reduced.

The local history of the crop makes a wonderfully variable record.

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* The Statistician has no occasion for explanation or apology on account of official crop statements. Their intended meaning is sufficiently plain for honest investigators of facts. Persons engaged in reckless speculation may be expected to garble quotations, pervert language, and force conclusions that are plainly illogical and false. It may not be possible to protect conscientious inquiry against the influence of these perversions. The public should discriminate carefully between statements that are official and those which are deliberately fabricated, as well as those, by mistake, assumed to be official, or credited to this office. While the statistical reports need no vindication, the burden of fabrications, misrepresentations, and false assumptions, which increase with the furor of speculation, should not be augmented by a thoughtless lack of public discrimination. As to occasional newspaper charges of collusion among our correspondents, in aid of speculation, or of interested motives of the Commissioner or Statistician, it is creditable to the good sense and honesty of the fraternity that they are few, and gratifying to know that those few are from irresponsible or prejudiced sources.

Storms have wrought injury at one point, and drought has been noticeably severe in a neighboring county; an average healthfulness and growth are reported at one point, near to which comparative desolation appears to reign. One field or district may have a deep and well-prepared soil, with clean after-culture, and be able to defy ordinary drought; another is thin and poor, imperfectly cultivated, and overgrown with neglected grass or weeds, promising comparative failure. Fully five-sixths of the returns represent "condition below 100."

The following extracts from correspondence—representing a very small proportion of the returns used in the tabular statement, and including those most unfavorable—illustrate these differences:

Mecklenburgh County, N. C.—In some sections of the county no rain since the 12th of May. One farmer, who raised 20 bales last year, planted more acres this year and will not pick over two bales. Several others in the neighborhood will do no better. The plants are 10 to 24 inches high. The bolls and forms fall off from extreme dry weather. One of our best farmers last year averaged 800 pounds of seed-cotton per acre on one of his fields. He used 200 pounds of Mapes' superphosphate to the acre. This year he used the same amount, and the same field will average 175 to 200 pounds with favorable fall. Up to July 1 we never had a better prospect. I think we cannot possibly raise half a crop in the county. Farmers all discouraged.

Bladen County, N. C.—The average condition has deteriorated 40 per cent. since July 1, and the crop promises a worse showing two or three weeks hence. The drought, extending from the last of June to the middle of August, stopped the growth; the cold snap of July 17 started the rust, and the cold spell of August 16 to 25, and the steady showers with no sunshine, increased it, and it has now run over nearly all the cotton; the leaves are off, the stalks are dead or dying, and the immature bolls are rapidly opening. The prospect now is for about half the crop expected July 1.

Greene County, N. C.—Rust since last report, and in some portions of the county the crop is almost a total failure. Two-thirds of a crop is all that can be expected, with the prospect of not doing as well as that. Since the unusually cool weather of July the plant has done next to nothing; all the forms and many of the bolls that have come since August 1 have dropped. The picking season will end thirty days earlier than last year.

Duplin County, N. C.—Rust appeared the first week in August, and rapidly spread over the entire crop, stopping growth, and causing the squares to fall off. Very little cotton has been made since August 15, and but for the unusually favorable spring and early summer, not one-half an average crop would have been made.

Franklin County, N. C.—The yield will probably be not much over half as large as last year. Severe drought.

Gaston County, N. C.—Cut short at a critical age, and will not recover. Estimate, seven-tenths.

Sampson County, N. C.—The crop did not suffer much until three weeks ago, when rust set in and has very much injured the crop. The estimate is four-fifths of an average product, and some think this too high.

Bertie County, N. C.—Rust has damaged cotton, and the dry weather of last month has caused it to shed its forms and small bolls.

Moore County, N. C.—Small growth and not well bolled.

Anson County, N. C.—Not over two-fifths of a crop. Drought.

Chowan County, N. C.—Badly injured by rust in some localities, and its general spread is apprehended, in which event the crop will be very short.

Beaufort County, N. C.—Rust more general than for many years; many fields ruined. All the middle and top forms and most of the leaves have dropped off. With 20 per cent. reduction of acreage and the condition hardly up to average, the crop will be reduced to 80 per cent. of that of last year.

Edgecombe County, N. C.—Sad change in the prospect since the last report. The plant did not seem to be very injuriously affected by the cold of July; it remained green and shed no more than usual. The stalks and limbs, not the roots, turned a deep red, however, and the plant ceased to grow. A blight, similar to black rust, has appeared all over the county, and the crop is very seriously damaged. Fall picking will be at least ten days earlier than usual.

Gates County, N. C.—Good growth, but the cold and wet have caused rust.

Perquimans County, N. C.—About two-thirds of last year's crop.

Martin County, N. C.—At least 33 per cent. below an average, and 50 per cent. short of the prospect six weeks ago.

Stanly County, N. C.—Hardly half a crop.

Craven County, N. C.—Injured by rust to the extent of 15 per cent.

Wake County, N. C.—Cotton has a very small weed; was very full, but has thrown off the forms to the extent of one-fifth or one-sixth.

Orangeburgh County, S. C.—The drought, ending with heavy rains and wind, has materially injured the cotton prospect in this county.

Chesterfield County, S. C.—Too much rain early, followed by drought. With the most favorable season the crop cannot exceed three-fifths of a crop.

Williamsburgh County, S. C.—Very little cotton made during the past month, most of the forms having fallen, and the plant is now so far advanced that there is no possibility of recovery. Allowing for reduced acreage, the crop of this county is estimated at 60 per cent. of that of 1870.

Fairfield County, S. C.—Drought has sadly injured the prospect since last report. Many farmers estimate half a crop; highest estimate, two-thirds. The crop will be harvested by the middle of November.

Lexington County, S. C.—Injured by drought, and cannot now produce an average crop.

Marion County, S. C.—Rust succeeded the dry weather. The yield will be less than two-thirds of an average, and the staple of low grade.

Sumter County, S. C.—In an experience of twenty years I have never seen a brighter prospect for a full crop than we had July 1, nor a prospect so completely blighted in so short a time. The harvest will close by October 15.

Clarendon County, S. C.—Decrease in acreage 30 per cent.; decrease in product 40 per cent. Up to the 10th of July the crop was promising, but, owing to the extreme heat and long drought with high winds, it showed signs of falling off. On 4th of August light rains commenced, and continued almost daily up to the present time. This dripping weather served to increase the rust, which had previously appeared, to an extent never before witnessed in the county.

Richland County, S. C.—Three-fifths of a crop is rather too high than too low for an estimate. Many farmers are not making one-third of a crop; very few are making full crops; and in rare instances more than a full crop.

Abbeville County, S. C.—Suffered from drought. In places the rust has made its appearance. If the fall should be favorable, the crop may recover all that it has lost. If we should not have early frost and the season should suit the plant, the blooms that may come for the next two weeks may make good cotton.

Union County, S. C.—The drought has reduced the late crop one-half. Most of it will be open by October 10, with favorable weather. The lint is short, and not first quality.

Spartanburgh County, S. C.—Seldom a better prospect for cotton than before the drought. Recent rains too late for the new growth to mature, unless the fall be unusually late and dry.

Newberry County, S. C.—Crop injured by drought. Average condition about 70 per cent.

York County, S. C.—Cut heavily by drought. Manured fields most injured.

Sumter County, Ga.—Suffered from drought; rust has appeared in some places.

Lincoln County, Ga.—The excessive rain of the past twelve days has materially reduced the prospects, to perhaps one-third below the average crop of last year; the season is so far advanced that an average product is impossible.

McDuffie County, Ga.—The dry weather and the excessive rains have caused the cotton to shed all its squares, and it has the rust on gray or sandy lands. I have not seen any field that will yield one-half a crop.

Richmond County, Ga.—Materially injured by the protracted rains; yield will be short.

Greene County, Ga.—Drought and intense heat caused the squares to burn to a black crisp; the rains have caused an improvement.

Stewart County, Ga.—Seriously injured by rust, nearly all of the upland and much of the bottom.

Jones County, Ga.—Crop cannot exceed 70 per cent. of an average yield.

Newton County, Ga.—Depreciated since last report, drought and high winds having thrown off the top crop.

Lee County, Ga.—Not more than two-thirds of a crop expected; injured by rains, and worms threaten further damage.

Spalding County, Ga.—Reports from different sections of this county vary; some claiming a crop equal to that of last year, others only half a crop; I think the product of the county will be an average one, but yet about one-fourth less than last year.

Milton County, Ga.—Very inferior, owing to drought in July and first half of August, and the rust causing it to shed forms. With favorable seasons henceforth, the crop may be 60 per cent. of an average.

Fayette County, Ga.—The showers have slightly improved the crop; prospect, 62 per cent.

Brooks County, Ga.—Boll-worm; rust and storm have seriously injured the crop, and with unfavorable seasons for gathering, not exceeding half a crop can be made.

Crawford County, Ga.—Drought, rust, and the boll-worm have caused a falling off in cotton.

Jackson County, Ga.—Prospect gloomy; the crop looked well up to the middle of July, when the drought began, continuing up to the 20th of August, with scarcely any rain; all the bolls have dropped; scarcely a bloom can be seen, and upon many fields the dry weather rust has done its work; one-third of a crop is a high estimate; rain is now falling, but it is too late for cotton or corn.

Wilcox County, Ga.—One-third less planted than last year; less manure used, and the crop is now taking the rust, rapidly dying and rotting in the field. The crop will be short of that of last year one-third, some farmers say one-half.

Murray County, Ga.—Injured by drought; short crop.

Marion County, Ga.—Suffered much from drought, and recently from storm.

Dooly County, Ga.—The drought and rust bid fair to cut the crop very short.

Schley County, Ga.—Prospects gloomy; just out of a four-weeks drought; from appearances, cannot make above half a crop.

Macon County, Ga.—The quantity of the crop cannot be much affected by future circumstances; about half a crop estimated.

Madison County, Ga.—Crop 40 per cent. below that of last year.

Wilkinson County, Ga.—Not more than half a stand, and rust taking it badly; not more than half a crop can be made.

Wilkes County, Ga.—The drought and the subsequent rainy weather have injured cotton; large proportion of bolls now matured and will soon open with dry weather; late planting now most promising, but necessarily a short crop.

Liberty County, Ga.—Not more than half the crop of 1870 in this county; all crops have suffered from a series of disastrous storms; fields deluged, crops blown down and partially destroyed, to the extent of at least 33 per cent. of the whole.

Carroll County, Ga.—Since last report the drought has almost ruined the cotton crop. The best fields in the county will not average more than 500 pounds to the acre—160 pounds of lint; the plant has shed the late bolls and forms.

Glynn County, Ga.—Much injured by late heavy rains; the bottom crop almost a failure.

Hancock County, Ga.—Drought and rust have greatly reduced the prospect.

Clay County, Ga.—Rust has appeared and stopped the growth of the plant and the maturing of the fruit; the few bolls opening on such stalks are light and defective in quality.

Columbia County, Ga.—Short crop; the heavy rains following the long drought have caused the plant to cast off the greater part of the young fruit; the crop is estimated to be the shortest that has been made for years—one-third to one-half less than last year.

Calhoun County, Ga.—The plants have shed most of the squares and bolls of August; rust very bad.

Laurens County, Ga.—Rust is general; storms have injured the crop, and the prospect diminishes daily.

Jackson County, Fla.—Rust severe, and will probably reduce the yield 25 per cent. from the crop anticipated about the 1st of July.

Hillsboro County, Fla.—Crop suffered severely from heavy storm which extended over the whole county, doing great damage.

Liberty County, Fla.—The wet weather of June and July has caused cotton to shed both its forms and leaves. No insects thus far.

Madison County, Fla.—The boll-worm has appeared, and is doing much damage. A heavy storm of rain and wind has blown down both trees and cotton, the latter being much damaged. Rust has also appeared in some places, and boll-rot, it is feared, will extensively prevail.

Leon County, Fla.—Suffering severely from rust and recent storms. There will not be much late cotton.

Clay County, Fla.—The storms of the 17th and 25th August injured the crop one-fourth it is thought.

Suwanee County, Fla.—Much damaged recently by boll-worms.

Putnam County, Fla.—Not more than one-fourth of a crop. Destroyed by storm of 17th and 18th August. The plants were entirely stripped of foliage and of the greater portion of the bolls and bloom.

Levy County, Fla.—Much injured by August storms, but with favorable season henceforth, there may yet be a good crop, as it is starting anew and is filling fast.

Dallas County, Ala.—The crop, which was well cultivated, has been cut short by a drought of nine weeks' duration. Rust is more general than ever before known. With weather favorable for picking the crop will be gathered by the 15th of October in this county. The crop cannot exceed two-thirds an average yield.

Pike County, Ala.—Much injured by drought—rust general. A late season cannot benefit the crop much, if any.

Randolph County, Ala.—Reduced acreage and crop injured by drought. This county made 5,015 bales last year; 2,000 bales will cover the crop this year.

Conecuh County, Ala.—Caterpillar appeared 10th August, and is increasing rapidly; moving slowly in a northeast course. One-fourth less planted than last year, and the dry weather will cause present planting to fall short at least one-fourth.

Marengo County, Ala.—Drought, rust, and worms. The general estimate is about half the yield of last year.

Autauga County, Ala.—Very short; not over three-fourths of a crop. Some put it at half the crop of last year.

Crenshaw County, Ala.—Injured by severe drought.

Montgomery County, Ala.—Some complaint of the boll-worm.

Etowah County, Ala.—Injured by drought.

Clarke County, Ala.—Cut off by drought of August. Allowing for decreased acreage, the crop will fall 50 per cent. short of that of last year.

Macon County, Ala.—The late drought has caused the ridge lands to shed the squares and the grown bolls to open prematurely. Some complaint of rust and worms. With favorable season, without insects, the county may make half a crop, and it may fall to one-third.

Chambers County, Ala.—Owing to the drought and heat the plants have thrown off their fruit, and some think there will be not more than half a crop; but if no disaster befalls the crop, I think it will reach two-thirds.

Hale County, Ala.—The army-worm is at work; crop backward. Two-thirds of an average crop is a liberal estimate.

Limestone County, Ala.—Half a crop. Long-continued drought.

Marshall County, Ala.—Injured by wet spring, and was insufficiently tended, or tended while the ground was too wet; hence it could not stand the drought from the middle of July to August 20. Rust has destroyed many acres. Many fields laid by in good condition are now foul, caused by the excessive rains of the last ten days.

Greene County, Ala.—Comparatively dried up in many places, and long since done growing and making. In bottom black lands, however, it is still growing and making slowly. Sixty-five per cent. of last year's crop is estimating hardly low enough to correspond with the prospect.

Clay County, Ala.—With our early frosts we cannot expect a half crop.

Attala County, Miss.—Crop at least one-third short. If injured by worms and early frost not more than half a crop will be realized. Where crops have been well worked they are as good as usual, but there is not more than one out of twenty of this sort.

Clark County, Miss.—The drought following the wet season preceding the middle of July has caused the middle and top crops to shed badly, at least one-half. Many of the half-grown bolls are now opening. Caterpillars and boll-worms have also injured the crop.

Claiborne County, Miss.—Army-worm in the adjoining county. There is little bottom crop, and the middle and top crops will not mature until the middle of the month. Prospect not encouraging, unless we have a late fall.

Grenada County, Miss.—Doing well at present, where there has been good culture. Most of the negro crops have been badly cultivated, and are very much spotted. There cannot be more than half to two-thirds of a crop.

Coahoma County, Miss.—The caterpillar has appeared. Extent of their depredations uncertain.

Kemper County, Miss.—Badly damaged by rust since last report. The uplands, which promised the best, have very much deteriorated. Will not make half a crop.

Lauderdale County, Miss.—Wet weather and the drought have caused the plant to shed the top crop. Caterpillars in some sections.

Issaquena County, Miss.—The worm has appeared in many parts of the county. No appreciable injury as yet.

Bolivar County, Miss.—Excessive rains have caused the plants to shed their forms to a great extent. Worms have appeared. Some call them the army or cotton worm, but I think them only grass-worms, which resemble the cotton-worm, and occasionally eat the cotton leaves.

Yalabusha County, Miss.—Cotton-worm has appeared, and it is feared they will eat every leaf in two weeks. If so the crop will be shortened very materially.

Newton County, Miss.—The boll-worm and caterpillar have made their appearance, but under the scorching rays of the sun they have not made much headway. The crop in Newton is better than those of adjoining counties.

Madison County, Miss.—The army and the boll worm have appeared on many plantations, and have already been very destructive. Their early appearance, while the crop is late, indicates that the already short crop will be reduced fully one-half.

Wilkinson County, Miss.—In estimation 60 per cent. of a crop. No allowance is made for the possible depredations of the cotton-caterpillar, which has appeared on many farms, and on some have done considerable damage already.

De Soto County, Miss.—Crop being shortened from want of rain.

Jefferson County, Miss.—The army or cotton worm appeared about August 10th, and has done considerable damage. The crop being a month late, will suffer more than usual from their ravages. Picking commencing slowly; most of the crops were laid by badly in the grass, which retards opening.

Hinds County, Miss.—The army-worm has appeared in some localities, but is not general.

Winston County, Miss.—Injured by drought. May yet improve.

Rapides Parish, La.—Three weeks ago the caterpillar was doing a small amount of injury in nearly every field. To-day there is scarcely a leaf left, and it is now believed that the yield cannot exceed one-fourth of a crop, and may fall as low as one-sixth.

St. Landry Parish, La.—The late dry weather has improved the crop, and it is now nearly an average. The army-worm has made its appearance, however, all over the parish, and there is every probability that the crop will be destroyed by the 5th to the 10th September, in which event but very little cotton will be made.

Washington Parish, La.—The late heavy rain during the past month has materially injured cotton, causing the plant to shed very much. There is also considerable complaint of worms, and fears are entertained that they will do much damage the coming month.

East Feliciana Parish, La.—Crop small, late, and full of worms, and now suffering from drought.

Tangipahoa Parish, La.—The caterpillar has appeared in almost every field, and, though late, will injure the crop materially. Bets are freely offered that the product will not exceed half of that made last year.

Avoyelles Parish, La.—The second crop of caterpillars are eating the cotton, and it is probable that in fifteen days all the leaves will be eaten.

Madison Parish, La.—No worms; weather fine and prospects flattering. If nothing occurs to change the prospect, I shall increase my present estimate (90 per cent.) next month.

Richland Parish, La.—The cotton worm has made its appearance in all parts of the parish, but no serious damage has yet been done. It is almost certain, however, that all the leaves will be eaten by the 20th or 25th, in which event not more than one-third of a crop can be expected.

West Feliciana Parish, La.—The unfavorable weather of the first part of August caused the plants to shed their forms, and stimulated the growth of the weed at the expense of the fruit and bolls. The crop has been laid by very grassy, and where the attempt to free it from grass was made, the cotton is yellow and has some rust. The caterpillar has appeared in every section of the parish and has increased rapidly. Though the weather is now dry, cotton is very green and full of sap, and the best judges think the crop will be destroyed, so far as leaves and young bolls are concerned, by the 20th September, if not sooner.

Morehouse Parish, La.—Crop three weeks behind the usual season, and will be cut short fully one-third. Damage by worms is apprehended, though they have done little as yet. Should their depredations continue, it is estimated that the foliage will be stripped by the 15th September, in which event not a half crop will be made.

Claiborne Parish, La.—Cotton-worm or caterpillar is in damaging numbers. Yet the crop is promising.

Tensas Parish, La.—Good weather and hard work have brought out the crop so that I have raised my estimate from 50 to 70 per cent. of a crop. The worms are abroad, however; the cotton is backward, and should the worms strip off the leaves in the first half of September, which is probable, the crop may be cut off one-half.

Williamson County, Texas.—The best crops will not average over half a bale to the acre. Injured by drought. Quality above average. A heavy rain would cause the forms to shed, and the new growth of stock would be too late to mature cotton.

Hardin County, Texas.—Acreage one-sixth less than last year, but the crop has been well cultivated, and the prospect is better. The worm has appeared and may do much damage.

Titus County, Texas.—The crop of Northeast Texas will fall 50 per cent. below that of last year. The prairie counties have suffered more than the timbered counties from the drought.

Marion County, Texas.—Short crop this year. Drought.

Ellis County, Texas.—Not more than half crop. Drought.

McLennan County, Texas.—Our farmers generally handle their cotton badly and allow a great deal to waste.

Upshur County, Texas.—Continued drought has reduced the crop to little more than one-half.

Red River County, Texas.—On the 1st of August a heavy yield was promised; fifteen days later the worms appeared, and already there are many ragged spots in the fields. Ten days will show to what extent they are to injure the crop.

Grayson County, Texas.—The drought has seriously injured the crop. No rain for nine weeks.

Milam County, Texas.—Yield small; staple inferior. Summer very dry.

Austin County, Texas.—Not more than half a crop. Badly injured by drought. The plant is not more than half its usual size. The recent showers have started the growth of the top crop, but the season is far advanced, the worm has made its appearance, and the crop can hardly mature.

Henderson County, Texas.—About 35 per cent. of a crop. The top crop cannot mature. The bolls are small and inferior. The lint is fine and strong, but very short.

Rusk County, Texas.—Suffered from dry, hot weather. The plants shed many of the squares left by the drought.

Smith County, Texas.—Drought and heat have materially reduced the crop.

Blanco County, Texas.—Not more than one-tenth of a crop. No rain for about three months.

Colorado County, Texas.—Crop has not been better for several years, according to acreage. The quality is also superior.

Dallas County, Texas.—Crop about one-third as large as that of last year.

Woodruff County, Ark.—Very wet in northern portion of the county; in southern part dry, causing material damage to the crop by rust.

Cross County, Ark.—Crop failing. Drought and heat.

Jackson County, Ark.—Some complaint of rust.

Union County, Ark.—Improved within thirty days, and as much per acre will be gathered as last year, but the acreage is much less.

Columbia County, Ark.—Better than usual. Many reports of the caterpillar in circulation; none in this neighborhood, but they have no doubt appeared in some crops.

Sebastian County, Ark.—The hot, dry weather has injured the crop to the extent of one-half.

Pulaski County, Ark.—Fewer bolls than last year; forms shedding; injured by hot, dry weather succeeding the wet. Too much growth in stalk.

Prairie County, Ark.—Weather throughout the year unfavorable to cotton. Not more than two-thirds the usual acreage planted, and that will average little over two-thirds of a crop.

Johnson County, Ark.—The hot-dry weather has reduced the condition to about 90 per cent., affecting most seriously the poor and dry uplands and the sandy bottoms, causing squares to fall, and a premature opening of the bolls.

La Fayette County, Ark.—The cotton-worm—leaf and boll—appeared on the 24th August, and is now in almost every field of cotton in the county.

Independence County, Ark.—The wet warm summer promises to be followed by a dry fall. Very little rain during the last fifteen days, and cotton is maturing finely. Picking has already commenced—nearly twenty days earlier than usual.

Crawford County, Ark.—The crop, which promised to be an average, has been reduced 25 per cent. by shedding the bolls.

Drew County, Ark.—Crop being damaged by drought.

Henry County, Tenn.—Good prospect.

Hardeman County, Tenn.—From the dry weather and the haste with which the crop was "laid by," cotton has very materially fallen off. The product cannot be larger than last year.

Gibson County, Tenn.—Decreased acreage and rust; crop about 60 per cent.

Giles County, Tenn.—Owing to the wet spring, cotton was grassy; hence the dry weather has been favorable.

Fayette County, Tenn.—Dry weather has materially injured cotton. Rust and shedding have caused considerable loss. An assistant, in another part of the county, writes that the crop has wonderfully improved since the last report, but some apprehension is felt for highland cotton, on account of the dry weather. If slight rains fall within the next ten days, the yield will exceed the average for the past five or six years.

Lauderdale County, Tenn.—Not more than half a crop. Rust and drought. Half the crop is now open.

New Madrid County, Mo.—A yield of one bale to the acre promised. Staple good.

HAY.

The hay crop is greatly reduced in quantity, but excellent in quality, in a majority of the States. The States producing a greater supply than usual are Georgia, Arkansas, Wisconsin, Iowa, Kansas, and Nebraska. The Missouri Valley, so long assumed to be a dry region, has secured an abundance, while the Ohio Valley has cut 10 per cent. less than usual. The crop of the States bordering upon the Atlantic, between South Carolina and Maine, has been reduced one-sixth, the reduction in those east of New York being one-fourth. The quality of hay gathered

is generally superior. In some sections injury resulted from sudden and frequent showers and storms in haying-time.

In Oxford County, Maine, it is deemed the smallest crop ever grown there. In Norfolk, Maine, the deficiency has been supplied by corn-fodder and millet. A second crop of much value, grown since the close of the dry season, has been secured in Montgomery, Pennsylvania, and the quantity of clover-hay has been increased 20 per cent. from a second cutting in Berks. In Carroll, Ohio, heavy rains are making a large autumn crop. A large portion of the Kansas and Nebraska hay is made from prairie-grass, and in the Northwestern States generally the wild grasses are greatly depended upon for supplies, which can be increased in many places very largely by utilizing a wider area of grasses, which would otherwise decay upon the ground. In the sparsely settled districts a dearth of hay may almost invariably be avoided by extra effort and industry in enlarging the area cut. In the Ohio Valley, also, the utilization of corn-fodder can make up almost any deficiency of the hay crop. Famine in the stock-yards of the West is, therefore, only possible through the negligence of stock-growers.

POTATOES.

The potato crop promises to be nearly an average one. The percentages below 100, or a full crop, are—Maine, 94; Vermont, 90; Massachusetts, 97; West Virginia, 89; Kentucky, 81; Illinois, 63; Indiana, 81; Ohio, 98; Michigan, 68; Wisconsin, 96; California, 88; Oregon, 90; and several of the Southern States, in which few are grown. Among the States above an average are New Hampshire, 105; Rhode Island, 102; Connecticut, 105; New York, 103; New Jersey, 105; Pennsylvania, 104; Missouri, 101; Minnesota, 111; Iowa, 105; Kansas, 105; Nebraska, 104.

The sweet-potato crop is a full one between New York and Virginia, and in Mississippi and Louisiana, and elsewhere in the Southern States somewhat below an average. The Eastern market supplies must be abundant. The following comprise a very few of the many notes which come with the estimates sent from each county for tabulation:

Oxford County, Me.—Good, but showing indications of rot.

Norfolk County, Mass.—Better than for some years, and no signs of rot.

Orange County, Vt.—Injured by rust and potato-bug in some localities, but promise an average crop.

Rensselaer County, N. Y.—Many raised. Early ones poor, and beginning to rot.

Allamakee County, Iowa.—Potato bug not very injurious.

Woodson County, Kansas.—Potatoes above average, and dull sale at 25 and 30 cents per bushel.

Seward County, Nebr.—Potato-bugs have not troubled us. Grasshoppers have not visited us.

Plumas County, Cal.—Frost has injured potatoes.

Erie County, Ohio.—Potatoes injured by drought and Colorado bugs, but by fighting the latter a very large crop has been secured. I harvested 650 bushels from 3 acres, and sold 500 bushels at 50 cents per bushel.

Mercer County, Ohio.—The potato-bugs have almost entirely disappeared.

Scioto County, Ohio.—Drought cutting short Irish potatoes. Sweet-potatoes stand the drought much better.

Van Buren County, Michigan.—Potatoes, a fair yield in spite of bugs. Enough for home consumption, but will rule high in price.

Newaygo County, Mich.—Potatoes retailing at $1 40 per bushel.

Mason County, Mich.—Potatoes will be scarcely worth digging.

St. Clair County, Mich.—Late potatoes seriously affected by drought.

Richland County, Wis.—Potato-bugs have not done much. Another bug has been killing them and destroying their eggs.

Walworth County, Wis.—Potatoes 60 per cent. of an average, and six-fold last year's crop.

Madison County, Ill.—Potatoes in good condition. Yield reduced by several sorts of bugs.

Sangamon County, Ill.—Potatoes a very poor crop; injured by drought and bugs.

La Grange County, Ind.—Potato bugs numerous and appeared early, but not near so destructive as last year.

Martin County, Ind.—Potato-bugs more destructive than ever. The striped and the black are very bad, but the Colorado has nearly disappeared.

Pike County, Ind.—Potato-bugs, especially Colorado beetles, very destructive.

Steuben County, Ind.—Crop greatly reduced by the ravages of the bug. The Early Rose was hardly molested by the bug, and fine crops of this variety have been grown.

Switzerland County, Ind.—Early potatoes did better than was expected in the presence of the potato-bugs. The crop of the county will be 90,000 bushels—10 per cent. above average.

Washington County, Ohio.—Potatees on deep moist soils will be a good crop; on thin light soils poor.

Henrico County, Va.—Not very good, except sweet-potatoes, which are exceedingly fine.

Fairfax County, Va.—Early planted, a full average crop; late, not more than half a crop.

Surry County, Va.—A large yield of sweet-potatoes expected.

Monroe County, Tenn.—The crop greatly damaged by late frosts, bugs, and dry weather.

Colorado County, Texas.—Sweet-potatoes almost a failure. Without early and abundant rain seed will not be made.

Tyler County, W. Va.—Potatoes above average in size and quantity.

Harding County, Ky.—Potatoes ruined by bugs.

Texas County, Mo.—The Colorado potato-bug has killed nearly all the potatoes.

New Madrid County, Mo.—Crop unusually fine, both Irish and sweet. I am cultivating a variety recently imported from Brazil, that yields 12 to 18 pounds to the plant, single potatoes often weighing 8 to 10 pounds.

Washington County, N. Y.—Symptoms of rot.

Erie County, N. Y.—Crop good. Early Rose splendid in size and yield.

Alleghany County, N. Y.—The Early Rose has done well despite the drought; never saw better.

Lancaster County, Pa.—Late planted will yield a large crop. The early will not be so productive, on account of spring drought.

Huntingdon County, Pa.—The late crop is being damaged considerably in some parts by the potato-bug.

Butler County, Pa.—A dry season, but some of the early varieties, as the Early Rose, have done remarkably well.

Elk County, Pa.—Late planted generally are better than the early, though the Early Rose seem to be taking the lead here for earliness and quality.

Bucks County, Pa.—The crop is very large and the early varieties are gathered in fine condition. Indications of rot in the late varieties have appeared in some localities.

Northumberland County, Pa.—Brown, striped, and black potato-bugs have made their appearance, and we fear they will injure our crop next year. The crop now harvesting is uncommonly abundant and of large size.

Nansemond County, Va.—There is no doubt of an average yield of potatoes.

TOBACCO.

Franklin County, Mass.—Looks finely, and the river towns are now cutting.

Hampden County, Mass.—Would have been above an average but from injury from hail and wind on the 7th of August, in parts of the southeast and northeast portions of the county.

Lancaster County, Pa.—That planted in the drought, just before the late rains, will be a better crop than last year, but in the northern, southern, and eastern parts of the county the crop will be poor, on account of rust.

Nelson County, Va.—Much below an average crop, and being kept back by dry weather, is late, and will be liable to injury from frost.

Mecklenburg County, Va.—Late planted still has a chance if rain comes soon.

Amelia County, Va.—A late crop, owing to severe dry weather.

Louisa County, Va.—The crop looks well.

Amherst County, Va.—The crop is improving rapidly.

Person County, N. C.—Tobacco, our special crop, much injured by dry weather. Crop will be short.

Wayne County, W. Va.—Tobacco promising up to the last week in July, when the extreme drought, lasting till August 25, materially injured the crop.

Trimble County, Ky.—The tobacco crop will be short.

Webster County, Mo.—The early promise of tobacco will not be realized.

SUGAR-CANE.

From the data received relative to the sugar crop, an increase of 30 per cent. in the aggregate manufacture may be expected. Last year's crop was, in round numbers, 145,000 hogsheads. It is possible that the sprouting of the cane, reported in several places, may result in greater injury than at present appears probable.

The persistent effort of sugar-planters, from year to year, to increase the area of plantations, merits and secures a fair degree of success; yet further time and effort will be necessary to place the business on its former footing. There is suitable land, capital, and labor enough in the country to furnish our full supply of sugar at a fair profit, and there appears to be a disposition on the part of sugar-growers to attain that result at as early a day as possible.

Plaquemines Parish, La.—The cane crop of this entire parish is in advance of last season about four weeks, and is of such superior character that the yield of the parish will exceed that of 1870-'71 by 50 per cent. The rains have been at no time excessive, nor have we suffered from drought. Mr. W. E. Lawrence's steam-plowed and steam-cultivated corn fields are the best evidence of the great and universal necessity for the steam-plow and cultivator.

Levy County, Fla.—Blown down by the storms of August, the cane is taking root and sprouting at every joint, and it is feared the crop is ruined for either seed or sugar.

Nassau, Fla.—Though sugar-cane is under water, it does not appear to be much injured.

Jackson, Fla.—Sugar-cane promises a fine yield.

Leon County, Fla.—Cane crop doing well.

Putnam County, Fla.—Cane crop either submerged or flattened to the earth by the cyclone of 17th and 18th August. There will be about three-fourths of a crop.

Conecuh County, Ala.—Sorghum and sugar-cane badly injured by dry weather. Yield at least one-fourth short.

Crenshaw County, Ala.—Sugar-cane injured by severe drought.

SORGHUM.

This crop is reported in fine condition in Wisconsin, Iowa, Missouri, Kansas, and Nebraska, and below an average in the other Western States, where the principal portion of the crop is grown. It is highly promising in Mississippi, and in Pennsylvania and Maryland, as far as it is grown in those States. In Braxton, West Virginia, it was attacked in places with a sort of rust at the time of heading out, causing the blades to dry up, and giving a disagreeable flavor to the sirup. Rust upon sorghum is reported also from Adair, Kentucky. In Harrison, Indiana, rust was noticed last year on the Chinese sorghum. The African Imphee has been grown in the same region this year, and is entirely free from blight.

RICE.

Promising accounts of the crop of 1871 have thus far been received. On the Atlantic coast a crop as large as that of last year is expected. Some increase in the area has doubtless been made in Louisiana, and the weather has been favorable to curing and stacking. A crop of 50,000 barrels is expected there, and sanguine estimates of 60,000 barrels are indulged in. The first consignment of 21 barrels from the Parish of Plaquemines and 3 from St. Charles was received in New Orleans August 5th, and 19 barrels, classed at low prime, brought 9⅜ cents. It is reported that at least 8,000 barrels of rough rice were lost by the overflow of the Bonnet Carre crevasse.

McIntosh County, Ga.—Rice is largely grown in this county. On the Altamaha River, one side being McIntosh County and the other Glynn, I think there are 5,000

acres of land planted in rice this year. The harvest is just commencing. The crop is good, fully an average. The risk to the planter is yet great from high winds, high tides, and bad weather.

Manatee County, Fla.—Rice promises a good yield.

Plaquemines Parish, La.—The rice crop of our parish will greatly exceed that of last year. Cutting commenced August 12 with those whose crops had sufficiently ripened. Much of it has been thrashed and cleaned and gone to market.

James Wood, in his recent circular, makes the following statement of the quantity and value of the Louisiana rice crop, so far as indicated by the yearly commercial record of sales:

Year.	Barrels.	Average price per barrel.	Total value.
1860	7,300	$12	$94,900
1861	8,921	18	100,578
1862	8,636	20	172,720
1863	6,873	30	206,190
1864	9,866	25	246,650
1865	11,943	23	274,689
1866	20,464	20	409,280
1867	21,663	18	389,934
1868	41,317	17	702,389
1869	57,956	15	869,340
1870	37,585	16	601,360

The receipts of rice at the several ports, as commercially reported for the year just closed, are as follows:

	Tierces.
Receipts at Charleston and Georgetown, South Carolina	44,073
Receipts at Savannah, Georgia	21,725
Receipts at Wilmington, North Carolina	600
Receipts at New Orleans, Louisiana	16,700
Total receipts, 1870–'71	83,098
Total receipts, 1869–'70	97,735
Decrease	14,637

At the commencement of the season the price at Charleston was 9 cents per pound for good; in November $5\frac{1}{2}$ to $5\frac{5}{8}$; in May, $8\frac{3}{4}$ @ 9, and in August closing at 8 to $8\frac{1}{2}$ cents.

The returns of sales of the rice of last year's crop indicate a large deficiency in the product of 1870. The amount of clean rice reported at New Orleans up to August 1 of the present year is 37,585 barrels, against 57,956 last year. The rough rice amounted to 25,899 sacks. The deficiency was in a large measure due, in Louisiana, to a late spring, a bad stand, and a deficiency of water to flood the fields.

FRUIT.

In New England the apple prospect is reported less than half a crop in New Hampshire and Massachusetts, 56 per cent. of an average in Vermont and Connecticut, and about two-thirds of a crop in Maine and Rhode Island. In some counties the crop is almost a total failure, while in others the fruit is small, though fair. In New York six-tenths

of a crop is reported, the product being much reduced by the dry season, causing the fruit to fall. In New Jersey the crop is less than half an average yield. Injury from hail-storms and from drought is reported from Pennsylvania, and in some sections the fruit is knotty and wormy; the crop is estimated at about three-tenths below average. Delaware reports three-fifths of a crop, and the hill country of the south, half to two-thirds of a crop. In Maryland the fruit is two weeks earlier than usual; the quality is inferior in the neighborhood of Baltimore. The dry weather affected the crop seriously in the South, but our Northumberland, Virginia, correspondent writes that apples have paid better than any other farm product this season. The Woodruff, Arkansas, reporter complains that, for several years past, midsummer apples have rotted and fallen. In the Western States the crop is generally better than in the east or south, Missouri, Wisconsin, Minnesota, Iowa, and Kansas each reporting more than an average. Kentucky falls the lowest—to 56 per cent. of an average. Ohio, West Virginia, Nebraska, California, and Oregon range from seven to nine-tenths of an average. Illinois and Indiana fall five to eight per cent. below an average. In localities, the fruit is dropping from the trees. In Warren and Butler Counties, Ohio, the crop is reported to be the best grown in twelve to fifteen years; and in Peoria, Illinois, it is "enormous." In Muscatine, Iowa, apples are "a drug in the market, selling at 25 to 35 cents per bushel," while in Woodson, Kansas, they "are not so fair or plenty as usual, and are selling at 85 cents to $1 per bushel." In Osage, Kansas, the crop was nearly destroyed by spring frosts.

Peaches have yielded above an average crop in most of the peach-growing regions of the Middle and Southern States, falling short only in Pennsylvania, Virginia, in the Carolinas, and in Tennessee. Our Morris, New Jersey, correspondent writes that the fruit has rotted considerably; that the late varieties have black spots on the skin and crack open; and that white moldy spots also appear on the under side of the leaves, causing them to die. In Cecil, Maryland, "there has never been a larger peach crop—many will go to waste." In Williamson, Texas, "peaches are plenty, but small, owing to the drought. Probably, ten times as many have been canned in this State this year as ever before in one season." In the Western States the crop ranges from about two-thirds of an average in Kentucky, Nebraska, and Oregon, to three-fourths in West Virginia, Indiana, Ohio, and California, over nine-tenths in Illinois, Missouri, Iowa, and above average in Kansas and Michigan. In Nicholas, West Virginia, the crop was reduced one-half by the curculio, and in Raleigh County there was much falling off. In Woodson, Kansas, where apples are scarce and high, peaches have been abundant at 30 cents per bushel. In Osage County they were wilting and rotting on the trees.

Grapes promise well from Maine to North Carolina. In the States south the crop is below an average, except in Alabama and Mississippi, and falling to about two-thirds of a crop in Georgia. In the West the crop is above an average, except in Kentucky, where it is only three-fifths, in Indiana, where it is reported five per cent. below an average, and in California, where it is rated 16 per cent. below. In Addison, Vermont, grapes have mildewed badly. In Essex, New Jersey, they have been seriously damaged by drought, Isabellas and Catawbas especially suffering. The Concord and Delaware remain comparatively free from rot. In Westmoreland, Pennsylvania, the "spot" on grapes is almost universal, and the slug, so prevalent on the rose in the early summer, has attacked the foliage of the grape. In Northumberland,

Pennsylvania, grapes are abundant and fine, but disposed to rot. In King George, Virginia, the "Monroe" grape bears abundantly, and of fine quality; other varieties badly affected by rot, except Concord and Maxatawney, which partially escaped. The black rot has cut off the crop in Marion, Georgia, and in Nicholas, Western Virginia, the curculio is said to have reduced the crop one-half. In Cass County, Missouri, early ripening stopped the rot, but the crop was injured by a heavy hail-storm. "The largest yield ever known" is reported from Franklin, Missouri. In Cole County there has been considerable rot, especially in the Delaware, Catawba, and Clinton; also in Rogers's Hybrids, except the Goethe, which is healthy. In Lawrence, Missouri, cultivated grapes are reported half a crop, wild grapes a failure. In Madison, Illinois, "grapes harvested in good condition before Setember 1; Concords have made a gallon of wine per plant." St. Clair County reports "grapes finer and more abundant than ever before, a drug in the market, selling at 2 cents per pound;" and in Knox County "grapes rival California grapes in abundance and cheapness, the finest Concords selling at 2 and 3 cents per pound." In Calhoun, Michigan, of eighteen varieties in fruit, only the Catawbas have suffered from rot to any extent. Rogers's Hybrid No. 15 rotted slightly. In Macomb County the crop was suffering for rain. In Muscatine, Iowa, grapes were selling at 2 to 3 cents per pound. The crop in Douglas, Kansas, was blighted to the extent of one-tenth, but the product is still large.

WEIGHT OF FLEECES.

The returns relative to condition of wool and comparative weight of fleeces of sheep do not indicate any very material changes. It is shown that a reaction has been commenced, as faith in the future of wool as a profitable product has increased; and in the wool-producing States, California, Ohio, and Illinois, fleeces are averaging somewhat heavier, as a result of greater care of flocks on the part of the best wool-growers:

Boone County, Ill.—Wool a better clip than usual. Our smaller number of sheep are better cared for.

Ripley County, Ind.—Sheep becoming scarce; good wethers bringing $3 per head. If sheep could be protected from dogs, they would be extensively kept on account of their wool, lambs, and manure.

Alameda County, Cal.—The spring clip of wool has been sold or gone to eastern markets; average price here, 30 or 31 cents per pound. Fall-shearing in progress; some clips arriving into market; prices 28 to 31 cents per pound. Full-blooded Merinos and their grades much sought after. English coarse-wool sheep are in less demand, being less suited to our long, dry seasons. Several manufacturers and agents have left for Australia to purchase fine wools.

Lake County, Cal.—This county noted for good wool, having 15,000 sheep. New England agents are buying up the clip. The mountain wool of California superior to the valley wool.

Los Angeles County, Cal.—Wool of better quality and price than ever before, though the fleeces average a little smaller than last year; more wool exported than in any former year.

Conejos County, Colo.—Wool improving in weight and quality.

Colfax County, N. Mex.—Wool in course of improvement by importation of sheep from Canada.

Fillmore County, Minn.—Manufacturers estimate the wool-clip ten per cent. less than last year.

Jackson County, Fla.—Sheep are increasing in numbers, and are receiving more attention; the wool will be of better quality.

Table showing the condition of the crops, &c., on the 1st day of August, 1871.

STATES.	Corn, average condition August 1.	Spring wheat, average condition August 1.	Spring rye, average condition Aug. 1.	Oats, average condition August 1.	Barley, average condition August 1.	BUCKWHEAT.		Potatoes, (*Solanum tuberosum,*) average condition August 1.	Potatoes (*Batatas edulis*, sweet,) average condition August 1.	Tobacco, average condition Aug. 1.	HAY.			Pasture, average condition August 1.	Beans, average condition August 1.	Cotton, average condition August 1.	Sorghum, average condition Aug. 1.	Sugar-cane, (not sorghum,) average condition August 1.	Apples, average condition August 1.	Peaches, average condition August 1.	Grapes, average condition August 1.	Cranberries, average condition Aug. 1.
						Acreage, compared with last year.	Average condition Aug. 1.				Average condition of timothy, Aug. 1.	Product of clover compared with last year.	Average condition of clover when harvested.									
Maine	95	89	99	90	92	97	88	97	.....	.....	70	61	75	68	83	.....	.....	.....	57	.....	109	90
N. Hampshire	105	105	100	109	104	103	93	111	.....	.....	75	61	75	87	105	.....	.....	.....	49	65	100	96
Vermont	89	97	97	92	96	97	91	92	.....	95	88	84	94	87	90	.....	.....	.....	67	.....	106	.....
Massachusetts	101	98	95	105	100	106	100	95	.....	100	90	84	90	89	104	.....	.....	.....	35	76	106	110
Rhode Island	103	.....	105	103	103	100	100	111	.....	.....	82	78	93	85	100	.....	.....	.....	35	100	122	100
Connecticut	100	.....	.....	102	102	102	97	105	.....	105	83	59	83	85	99	.....	.....	.....	42	53	113	100
New York	100	101	98	104	102	98	102	108	.....	101	92	92	95	100	102	.....	.....	.....	63	61	99	78
New Jersey	98	.....	.....	88	95	91	100	108	89	.....	82	66	88	109	105	.....	.....	.....	57	99	100	75
Pennsylvania	98	93	97	88	83	100	96	101	105	97	80	73	85	92	98	.....	100	.....	62	72	103	101
Delaware	115	.....	100	75	.....	105	105	111	110	.....	100	96	100	110	100	.....	102	.....	73	125	106	100
Maryland	83	.....	.....	61	.....	100	99	88	97	100	74	68	85	78	101	.....	100	.....	84	110	106	.....
Virginia	98	.....	.....	75	.....	99	88	94	102	91	85	90	94	95	95	98	90	.....	78	76	96	.....
North Carolina	94	.....	.....	57	.....	94	86	102	95	88	105	102	101	90	81	94	85	.....	48	80	97	97
South Carolina	97	.....	.....	62	100	.....	.....	103	93	102	.....	96	106	84	98	96	95	100	70	84	94	.....
Georgia	87	.....	.....	61	82	.....	.....	104	93	87	89	108	102	100	89	80	83	99	79	100	85	.....
Florida	88	.....	.....	82	.....	.....	.....	104	111	108	.....	.....	.....	105	.....	83	.....	114	116	100	105	.....
Alabama	77	.....	.....	78	90	.....	.....	104	92	95	100	107	94	92	88	81	82	101	85	120	95	.....
Mississippi	84	.....	.....	102	100	.....	.....	98	100	98	.....	113	100	108	94	80	89	94	106	128	93	.....
Louisiana	78	.....	.....	71	.....	.....	.....	97	97	78	.....	.....	.....	106	100	83	.....	97	97	108	92	.....
Texas	78	.....	.....	98	96	.....	.....	91	75	90	70	.....	.....	71	84	84	78	96	110	92	98	.....
Arkansas	100	.....	.....	91	.....	.....	.....	90	101	93	102	127	103	107	77	98	112	.....	91	101	83	.....
Tennessee	100	.....	.....	81	98	94	93	88	96	94	92	99	98	99	96	100	93	.....	57	106	82	.....
West Virginia	101	.....	.....	86	95	97	96	98	100	98	83	80	93	88	101	.....	97	.....	83	84	97	.....
Kentucky	97	.....	.....	98	93	103	95	90	98	91	89	90	93	89	87	93	90	.....	61	62	71	.....
Missouri	108	77	92	88	97	102	99	93	100	100	98	101	101	104	101	102	99	.....	97	93	99	.....
Illinois	103	62	97	89	88	101	99	78	94	90	97	98	99	86	96	.....	98	.....	93	75	105	.....
Indiana	100	89	100	97	99	95	95	88	95	91	88	92	101	86	100	.....	94	.....	102	65	95	82
Ohio	102	87	100	106	99	95	94	104	98	96	92	94	96	97	100	.....	96	.....	68	71	98	.....
Michigan	100	95	93	97	89	97	93	83	93	.....	92	88	100	84	97	.....	102	.....	89	99	108	96
Wisconsin	104	84	96	109	104	94	92	94	106	99	109	108	108	91	100	.....	103	.....	105	.....	107	99
Minnesota	105	75	85	87	91	97	101	106	.....	.....	102	100	103	91	92	.....	108	.....	106	.....	110	104
Iowa	109	83	99	108	100	108	101	108	104	106	103	106	106	95	104	.....	103	.....	107	97	110	.....
Kansas	110	80	101	99	91	110	104	111	106	98	108	120	98	120	110	.....	108	.....	96	100	102	.....
Nebraska	109	77	91	90	85	116	101	103	108	.....	97	106	103	103	107	.....	109	.....	65	20	96	.....
California	97	82	.....	87	79	76	89	92	88	.....	98	74	57	70	90	.....	.....	.....	95	85	93	.....
Oregon	98	92	104	93	103	100	98	97	.....	.....	97	108	109	101	99	.....	.....	.....	98	73	104	.....

Table showing the condition of the crops, &c., on the 1st day of September, 1871.

STATES.	Corn, average condition September 1.	Wheat, average condition when harvested.	Rye, average condition when harvested.	Oats, average condition when harvested.	Barley, average condition when harvested.	Buckwheat, average condition September 1.	Potatoes, (*Solanum tuberosum.*) average condition September 1.	Potatoes, (*Batatas edulis*, sweet,) average condition September 1.	Tobacco, average condition September 1.	Cotton, average condition September 1.	HAY.			Sorghum, average condition September 1.	Sugar-cane, (not sorghum,) average condition September 1.	HOPS.		STOCK HOGS.		Wool, weight of fleece compared with an average clip.	Apples, average condition September 1.	Peaches, product compared with an average.	Grapes, average condition September 1.
											Product of timothy, compared with last year.	Average condition of timothy when harvested.	Product of hay of all kinds compared with last year			Acreage compared with last year.	Average condition September 1.	No. for fattening compared with last year.	Average condition as to weight and size.				
Maine	95	95	98	94	88	82	94	.....	.....	.....	59	105	63	90	.....	.....	.....	102	99	96	65	.....	96
New Hampshire	102	104	100	106	103	98	105	.....	.....	.....	76	85	71	102	.....	.....	.....	101	100	98	44	.....	102
Vermont	91	99	96	99	99	93	90	.....	.....	.....	85	101	83	94	.....	81	79	98	100	100	56	.....	108
Massachusetts	104	101	102	103	98	105	97	.....	108	.....	78	100	72	100	.....	.....	.....	105	102	99	49	75	117
Rhode Island	106	.....	102	102	100	.....	102	.....	.....	.....	72	107	71	102	.....	.....	.....	97	102	103	65	112	111
Connecticut	104	100	96	100	100	108	105	.....	111	.....	80	93	83	101	.....	.....	.....	98	98	100	56	75	113
New York	98	102	102	104	99	89	103	.....	103	.....	87	97	94	98	.....	88	78	102	100	100	60	.....	99
New Jersey	100	110	105	82	.....	97	105	98	.....	.....	74	86	70	97	.....	.....	.....	102	101	100	45	111	97
Pennsylvania	101	107	104	92	95	92	104	100	100	.....	72	90	73	98	100	.....	.....	104	99	100	59	82	104
Delaware	107	97	100	62	.....	100	105	100	.....	.....	87	90	90	100	100	.....	.....	112	117	100	60	125	100
Maryland	100	102	102	69	.....	68	90	96	93	.....	63	88	62	98	105	.....	.....	108	101	100	70	121	114
Virginia	90	79	85	73	.....	77	88	98	83	97	83	97	87	91	84	.....	96	103	104	100	60	80	101
North Carolina	82	59	74	58	77	64	92	82	81	82	92	89	89	79	76	.....	.....	99	96	96	48	87	93
South Carolina	88	53	86	62	100	.....	100	89	81	80	.....	.....	68	87	77	87	.....	95	92	99	64	92	71
Georgia	81	52	72	55	82	.....	104	91	85	78	105	104	102	89	81	95	.....	101	102	97	68	100	68
Florida	79	.....	.....	82	.....	.....	100	93	.....	75	.....	.....	96	.....	.....	98	.....	110	102	104	.....	106	93
Alabama	75	65	77	74	.....	.....	105	92	90	80	95	.....	90	92	69	84	.....	103	101	101	86	118	111
Mississippi	88	94	98	100	.....	.....	93	100	97	80	.....	.....	97	106	110	113	.....	110	109	97	103	131	106
Louisiana	70	.....	.....	110	.....	.....	94	100	.....	77	.....	.....	98	.....	.....	94	.....	92	95	103	96	101	88
Texas	80	84	91	94	90	.....	93	75	80	80	.....	.....	65	80	78	82	.....	94	100	98	91	110	98
Arkansas	100	70	86	96	.....	.....	93	99	102	95	109	100	148	95	98	.....	.....	112	100	100	89	104	89
Tennessee	90	70	85	90	95	83	85	88	86	96	91	96	97	89	82	.....	.....	103	103	100	65	93	92
West Virginia	91	94	99	92	96	85	89	92	92	.....	82	93	84	93	89	.....	91	105	95	101	77	75	89
Kentucky	85	65	76	96	93	95	81	89	80	75	84	91	86	76	75	.....	.....	101	92	99	56	61	59
Missouri	108	97	97	90	88	96	101	99	101	93	110	102	110	100	100	.....	105	114	106	100	107	92	111
Illinois	95	92	100	95	93	85	63	85	85	88	94	103	98	95	84	.....	82	107	105	101	92	91	108
Indiana	97	91	96	96	102	88	81	94	91	.....	83	95	86	98	96	.....	96	112	102	100	95	71	95
Ohio	98	99	99	110	102	87	98	97	94	.....	91	99	92	96	92	.....	90	115	101	102	72	72	110
Michigan	93	106	101	101	93	87	68	105	87	.....	78	102	79	94	96	.....	75	110	100	99	92	102	104
Wisconsin	109	94	101	110	103	100	96	.....	108	.....	108	105	110	102	123	.....	62	113	100	101	116	.....	117
Minnesota	108	80	97	95	98	97	111	.....	90	.....	96	107	100	100	97	.....	95	113	101	99	112	.....	105
Iowa	113	90	101	109	100	101	105	104	101	.....	112	105	110	103	103	.....	97	112	105	99	108	97	110
Kansas	115	98	100	97	97	102	105	104	100	.....	120	110	130	96	106	.....	100	120	108	100	105	118	102
Nebraska	112	80	93	86	87	100	104	112	.....	.....	110	109	110	101	104	.....	.....	141	107	94	86	60	99
California	90	75	90	80	77	90	88	98	100	.....	80	100	78	90	100	.....	100	85	95	102	84	72	84
Oregon	99	98	88	90	94	88	90	.....	.....	.....	91	87	98	99	.....	.....	110	96	100	99	86	66	101

EXTRACTS FROM REGULAR CORRESPONDENCE.

THE EGYPTIAN COTTON-SEED.

Stewart County, Ga.—The Tumel Maki cotton-seed from your Department has given different results. Some plantings have done very little in fruiting, though the plant is all fine, while other plantings have a heavy yield of bolls and are now doing well, never having been disturbed by insects or other cotton accidents.

Macon County, Ga.—The Tumel Maki cotton-seed sent to me by the Department seems to have proved itself worthless. I planted some of the seed on ground that would produce, with ordinary cotton, 600 or 700 pounds lint cotton to the acre. This will not produce 50.

Randolph County, Ala.—My Egyptian cotton, Tumel Maki, is doing very well, considering the lateness of sowing and drought. I think it will average twenty bolls to the stalk, five or six feet high; common cotton, two and three feet.

Duplin County, N. C.—A package of Tumel Maki cotton-seed received from the Department has grown to an extraordinary height, but from present appearances will not yield one-fourth the amount of our ordinary cotton.

Chowan County, N. C.—The Egyptian cotton-seed was planted in due time. The growth is very pretty. Its leaf is much larger than the common variety, and the bloom yellow, while ours is white. It is at least fifteen days later than ours, and I fear it will be too late for this climate.

SCHONEN OATS.

Clark County, Miss.—I sowed four pounds of white Schonen oats on one-ninth of an acre of flat pine-woods land, fertilized with ten bushels of cotton-seed. Yield, four bushels, weighing a little over forty pounds to the bushel. I think the yield would have been one-third more but for the frequent heavy rains at the time the oats were in bloom. Some rust appeared on the blades. Straw, bright and clean. I believe that it will prove a good variety for this part of the State.

Macon County, Ga.—The white Schonen oats did tolerably well, but they are subject to rust, and, therefore, not so suitable to this section as oats that are known as "rust-proof oats."

ONIONS IN MISSISSIPPI.

Yalabusha County, Miss.—I planted the onion-seed in May, hoping to get sets by fall, and, to my surprise, gathered a fine crop of onions, some measuring thirteen inches in circumference.

CORN FROM PERU.

Lincoln County, N. C.—I planted the corn from Peru very carefully and in rich soil; it came up well but did not flourish. It was planted sufficiently early not to be affected by the drought, yet there has not been a single shoot and but few tassels. From this I judge it will not suit our climate.

CALIFORNIA CLOVER.

Victoria County, Texas.—The California clover is being tried as a forage crop with eminent success.

ORANGES.

Hillsborough County, Fla.—The orange crop has been cut short at least one-fourth by the severe storm. Bananas suffered severely. Great damage done to young fruit trees all over the country. Many trees blown down.

Plaquemines Parish, La.—The orange crop of the east side of the Mississippi is an entire failure, the trees having either been killed or so damaged by the cold of last winter that they will not bear fruit for several seasons. On the west side the trees are laden with fruit, all of which has been purchased by speculators, as is the custom, when the trees are in bloom or when the fruit is about the size of the hazel-nut.

Manatee County, Fla.—Sweet oranges do not look so well as early in August, owing to having been beaten and switched about by a heavy gale on the 17th. Guavas have recovered from last year's freeze and are in bloom again. Never a more abundant yield of wild grapes.

PEANUTS.

Hickman County, Tenn.—Owing to the drought our staple crop, the peanut, will be cut short 50,000 bushels.

Cheatham County, Tenn.—About 60 per cent. of a crop as compared with last year.

Humphreys County, Tenn.—Crop large and very fine.

PECAN NUTS.

Victoria County, Texas.—The prospect of the pecan crop at present is worth five times as much as the cotton crop.

CHEESE AND TOBACCO IN BUNCOMBE COUNTY, NORTH CAROLINA.

Buncombe County, N. C.—This part of the country is rapidly increasing in the growth of the various grasses, both for mowing and pasturage. Several cheese factories are now in full operation, with flattering prospects of success. Our people are now growing considerable tobacco, with a fair prospect of its being a profitable crop. A manufactory to put it up is now in full blast in our county.

COTTON-SEED AS A FERTILIZER.

De Soto County, Miss.—On the 15th of last December I sowed 40 bushels of cotton-seed per acre on four acres of ordinary upland; plowed thoroughly with two horses; sowed wheat and dragged it in with a two-horse harrow. February 10, sowed one gallon clover-seed per acre. June 10, cut the wheat, full 20 bushels per acre. July 20, mowed the clover, fully 1½ ton per acre, and shall get another mowing of same quantity in about twenty days.

GUM FROM THE MESQUITE.

Bexar County, Texas.—Our children are making from two to three dollars per day gathering gum from the mesquite tree, (*Algarobia glandulosa.*) It is found oozing from the tree in quantities of one-half an ounce to pounds in weight. If the crop could have been gathered and sold at 15 cents per pound, it would have brought millions of dollars to Western Texas. About 40,000 pounds have been bought by our druggists.

COTTON-SEED MEAL FOR MILCH COWS.

Ashby, Mass.—Up to September 7, of last year, I had been feeding, in addition to poor pasturage, to each cow one quart each of shorts and corn-meal mixed. On that day I commenced to feed to each cow a handful of clean cotton-seed meal mixed with an equal quantity of corn-meal, doubling the quantity each day until it reached two quarts to each cow, or four quarts of the mixture. The measure of milk was as follows: September 7, 12 quarts; 8th, 13 quarts; 9th, 14 quarts; 10th, 14½ quarts; 11th, 16 quarts; 12th, 17 quarts; 13th, 17½ quarts—making an increase of nearly 50 per cent. in one week. Never saw that it caused garget. When I notice any tendency that way I mix one pint of bran-meal with the feed.

DROUGHT, ETC., IN FRANKLIN COUNTY, MISSOURI.

Franklin County, Mo.—This year, up to August 30, will long be remembered as the dry season. There has not been rain enough for the water to run in the furrow since the 15th of April. The springs and cisterns have failed to afford water, and four-fifths of the farmers get their supply from some distant brook or fountain. While the yield of small grains and grass is light, Indian corn is what might be called a medium crop. Of hogs there are now one-third more in this county than ever before, and with an abundance of apples, peaches, wild fruit, and nuts, there will be a good surplus of pork. The potato crop has suffered from the ravages of the bug. This county claims to be the banner tobacco county of the State, having taken more premiums at the State fairs during the last ten years than all the rest of the State combined. Much attention is now being paid to fruit culture, which is likely to supplant tobacco culture.

EFFECT OF IMPROVED DRAINAGE.

Wood County, Ohio.—Here, when the soil is first brought under the plow it is too rich for wheat; and, owing to this fact, corn has hitherto been the staple crop of the county. But the relative acreage of these crops is changing, and last fall a much greater breadth was sown to wheat than ever before, and the yield is excellent both in quantity and quality. This liberal harvest is owing, in a great measure, to improved drainage. The lands of the county incline very gradually toward Lake Erie, having few natural drains, and these of limited effectiveness. To supply this want, the people have applied themselves energetically to the construction of artificial water-channels, until now the ditches in this county amount to thousands of miles in length.

FLAX IN OHIO.

Delaware County, Ohio.—It is estimated that in this county quite 4,000 acres are devoted to flax, yielding 30,000 bushels of seed. The straw is sold at Delaware, the county seat, where there is a large manufactory, at from $4 to $10 per ton.

EXCESSIVE DEVOTION TO SPECIAL PRODUCTS.

Medina County, Ohio.—Dairy products are low in price, while wool has advanced quite 25 per cent. In 1866 this county had 17,130 head of

cattle, and 161,616 sheep; now it has 28,373 cattle, and only 51,757 sheep, showing a decrease, in five years, of 109,859 sheep, and an increase of 11,243 cattle, chiefly cows. The change has been too sudden and violent, and reaction is taking place. Medina is not an exceptional county. A similar state of things prevails over the whole of Northern Ohio, the number of cows having increased, and that of sheep diminished, until now we average one cow to every man, woman, and child, and have scarcely sheep enough to supply our own woolens.

HEAVY WOOL-CLIPS.

Boone County, Ill.—My father has 22 ewes, grades, which in June sheared 130 pounds of clean wool, or an average of $5\frac{10}{11}$ pounds per head. They had had good pasture and good care, and each has raised a thrifty lamb.

CATTLE IN SOUTHERN MOUNTAIN REGIONS.

Cherokee County, N. C.—At this season of the year fat beeves are being driven from the mountains, which were poor when sent hither in the spring. Every spring, Tennessee dealers drive into our mountains hundreds of cattle, which they sell the ensuing fall for beef.

DISEASE AMONG HORSES.

Stanislaus County, Cal., August 1.—In my July report I mentioned the appearance of a new disease among horses and mules in the east section of this county. Since then it has spread and increased, and there is probably now near two hundred head of old and young animals affected. Not more than six or seven have died; still, none are getting better. All that I have seen are affected very similar to the account of the "nervous phenomena," in the splenic fever, on page 99 of the "Report on the Diseases of Cattle," recently forwarded me from the Department. A neighbor, two and a half miles south of our farm, has forty or fifty horses and mules affected. Other farms have from one to ten horses or mules in different stages of the disease. We have twenty odd head, none being affected, as we can see. We attribute our exemption to the fact that our stock has free access to salt at all times.

September 1.—The new disease among horses, in the east part of this county, has not increased since my last report. About two hundred have been affected, while only ten have died. The others are slowly recovering, but none will be fit for work for some length of time.

Marion County, Ky.—There is some distemper among the horses and mules; also, there has been a greater amount of lockjaw among the horses this summer than ever before known. A specific for lockjaw is to immerse, if possible, the animal in cold water, except the head; and if no pond or stream is near that is deep enough for immersion, pour the water on as continuously as possible. A horse in the very worst stage of lockjaw, if immersed in a pond, creek, or river, will be relieved in thirty minutes.

A Queens County (New York) correspondent states that the disease which threatened to become epidemic among horses in New York City, has almost entirely disappeared among those taken from the city to pasture in that county.

PLEURO-PNEUMONIA.

A correspondent writes from Middlesex County, Virginia, that there have been fifteen cases of pleuro-pneumonia, or lung plague, in that county, recently, and all were fatal.

HOG-CHOLERA.

Moore County, N. C.—There has been great mortality among hogs, in some portions of this county, from what is popularly known as hog-cholera.

Lincoln County, N. C.—Hog-cholera has prevailed to an alarming extent; at least 50 per cent. have died. For the past three or four weeks have heard of no new cases, and hope it has abated.

Glynn County, Ga.—Cholera has prevailed to a very great extent among the hogs. In some parts of the county more than half have died. I have not had an opportunity to observe any case closely, but find that nearly all the dead hogs were in good condition.

Dooly County, Ga.—The cholera has prevailed to a considerable extent among hogs in this county, and no remedy for a cure has yet been discovered. We believe that it is contagious; and the best preventive I have found is the free use of spirits of turpentine, mixed with tar and a small quantity of camphor. It can be used either externally or internally. I prefer the latter, by soaking corn in it for ten or twelve hours. I have never failed in arresting the disease.

Richland Parish, La.—Hog-cholera in some localities.

Stewart County, Tenn.—There has not been much hog-cholera, but a few farmers have lost nearly all their pork-hogs.

Monroe County, Tenn.—Hogs are greatly reduced in number by cholera and other diseases. We have as many, however, as we can fatten well.

Lawrence County, Tenn.—Cholera is commencing among the hogs.

Marion County, Ky.—Some hog-cholera in different parts of the county.

Southampton, Va.—Cholera and other diseases have been prevalent, and the stock has suffered greatly.

BRITISH IMPORTATIONS OF WHEAT AND COTTON.

The following is the official record of imports of cotton into Great Britain during six months of 1870, ending June 30, and a similar period in 1871:

RAW COTTON.

	Quantities.		Value.	
	1870.	1871.	1870.	1871.
From United States ....(cwt.).	3,914,270	7,099,428	£20,831,175	£24,566,770
Brazil.....do..	309,120	395,840	1,675,368	1,447,949
Turkey .....do..	62,414	7,913	294,288	27,769
Egypt .....do..	709,124	829,173	3,979,288	3,341,627
British India.....do..	802,947	1,244,686	3,309,401	3,623,911
Other countries.....do..	97,241	131,205	507,252	498,850
Total	5,895,116	9,708,245	30,596,772	33,506,876

The proportion of cotton imported from the United States in this period of six months is 66 per cent. in 1870, (January 1 to July 1,) and 73 per cent. in 1871; the proportionate importation from India decreased in the same period from 13.2 per cent. to 12.8. The total increase in quantity is 64 per cent., and the increase in the United States shipments 80 per cent., over those of the previous period. The reduction in price of our cotton is 35 per cent., or from 23.7 cents (gold) to 15.4 cents per pound. The reduction in the case of India cotton has been from 18.3 to 12.9 cents, or 29 per cent.

Later official returns show the receipts from the United States for eight months, to August 1, 1871, to be 7,670,577. The average price for this period is 22.8 cents in 1870, and 15.5 cents in 1871, while the average prices of India receipts were respectively, for the periods named, 16.6 cents, and 13.2 cents.

WHEAT.

	Quantities.		Value.	
	1870.	1871.	1870.	1871.
From Russia .....(cwt.).	4,563,334	5,906,640	£2,033,840	£3,377,868
Denmark .....do..	221,187	14,340	105,013	9,370
Germany .....do..	1,691,927	1,327,310	919,385	878,761
France .....do..	17,377	38,246	8,581	21,248
Austrian Territories...do..	42,327	191,546	19,304	119,229
Turkey, Wallachia, and Moldavia.....(cwt.).	272,605	573,538	116,200	308,230
Egypt .....do..	95,550	35,611	40,702	19,598
United States.....do..	6,081,277	5,619,861	3,083,597	3,365,300
Chili .....do..	187,020	136,457	107,668	92,132
British North America.do..	580,655	734,826	301,535	417,729
Other countries.....do..	89,865	175,183	41,871	108,271
Total	13,843,124	14,753,558	6,777,696	8,717,736

WHEAT, MEAL, AND FLOUR.

	Quantities.		Value.	
	1870.	1871.	1870.	1871.
From Germany .....(cwt.).	548,281	446,788	£362,744	£415,644
France.....do..	555,968	1,224	392,809	828
United States.....do..	1,105,782	1,156,672	702,765	879,395
British North America.do..	62,357	94,416	42,451	69,358
Other countries.....do..	203,828	415,065	135,921	409,440
Total	2,476,216	2,114,165	1,636,690	1,774,665

The wheat received from the United States, 5,619,861 cwt., was 38 per cent. of the total of 14,753,558 during six months of the present year; while the proportion for this country during a like period of 1870 was 44 per cent. The proportion received from Russia was 33 per cent. in 1870, and 40 in 1871. In wheat flour the advantage is with the

United States, the receipts being 1,105,782 cwt. in six months of 1870, and 1,156,672 cwt. in 1871, of the respective aggregates of 2,476,216 and 2,114,165 cwt. The increase in prices is marked, the average price of flour from the United States being but a fraction less than $3 per cwt.

Although the cash receipts of our shipments of wheat and flour amount to a larger sum than those of the first half of 1870, they represent an insignificant proportion of the value of our wheat crop. Their value for the first half of the present year is $21,223,475. Even the proportion exported from the great wheat mart of the West, upon which foreign purchasers depend largely for supplies, is quite small—a well-known fact, which is thus stated in the Chicago Tribune of August 18: "Of the vast quantities of grain that leave Chicago yearly, scarcely 20 per cent. of the wheat, and not 5 per cent. of the corn, finds its way across the Atlantic. The rest all goes to supply the wants of the American people who live to the east of us, and is scattered, in big lots or little driblets, all along the route to the sea-shore. The demand for American consumption is what has built up the grain trade of this city."

SUGAR AND MOLASSES CROPS OF CUBA, 1870–'71.

We gather some facts in regard to the above interests from the Havana Weekly Report. As is generally known, the production this year has been comparatively small, owing to the two hurricanes that swept over the principal sugar districts of the island in October, 1870, and to the drought which preceded and followed them. Cuba produces nearly one-third of the quantity of sugar consumed in Europe and America; hence it is quite natural that, in view of the decrease of production, speculators have been operating on a large scale, causing an almost continuous advance of prices, much to the profit of the planters, who have thus been partly compensated for the decrease in their crops. The prices for clayed sugars No. 12, of current classes, average 10¾ reals per arrobe, for the period from January 7 to July 15, against 8½ reals per arrobe for the corresponding period of 1870, and was selling at 11¼ to 11½ reals per arrobe at the latest date named. Special sorts have sold at ¼ to ¾ real higher, and whites have exceeded last year's range by 1½ to 2½ reals per arrobe.

The total exports this year from the ten principal ports of the island are equal to 1,868,300 boxes, (reducing hogsheads to boxes,) against 2,665,184 boxes last year. Estimating the stock remaining at 638,750 boxes, and the local consumption (for the whole year) at 350,000 boxes, the total production of the island for the season of 1870–'71 is 2,857,050 boxes, against 3,818,447 boxes for the preceding year.

The exports of molasses from the several ports of the island, to June 30, were 215,090 hogsheads, against 292,926 hogsheads in same period of 1870. The remaining stock is not more than half the amount at same date last year, when it amounted to 35,000 hogsheads. The prices for clayed have advanced from 4½ to 5½ reals in January to 8 to 8½ reals in June, and for muscovado from 5 to 6 reals in January to 8½ to 9½ reals in June—the average being for clayed 6½ reals, and for muscovado 6⅞ reals, against an average in 1870 of 5½ reals for clayed and 6¼ reals for muscovado.

The probable total exports in 1871, and the totals of previous years, are shown in the following statement:

	Hhds.
Exported to 30th June, 1871	215,090
Stocks at date	17,500
Exports in 1871	232,590
1870	328,292
1869	380,078
1868	399,249
1867	298,000
Exports in 1866	321,000
1865	285,500
1864	263,000
1863	262,200
1862	265,000
1861	262,000
1860	275,000

The yield of the cane on the island for the past ten years is given as follows in tons:

	Sugar.	Molasses.	Total.
1871	542,840	151,183	694,023
1870	725,505	213,389	938,894
1869	726,237	247,050	973,287
1868	749,389	259,011	1,008,400
1867	597,146	193,700	790,846
1866	612,180	208,650	820,830
1865	619,780	185,575	805,355
1864	515,090	170,950	686,040
1863	511,860	170,430	682,290
1862	511,100	172,250	683,350

The exports of sugar and molasses to the 30th of June were distributed as follows: United States, 78 per cent.; Great Britain, 12; south of Europe, 5; France 2; north of Europe, 1; other ports, 2 per cent. In 1870 they were to the United States, 61 per cent.; Great Britain, 26; south of Europe, 5; France, 4; north of Europe, 1; and other ports, 3 per cent. The imports of the United States up to the 30th of June were 348,303 tons, against 308,151 tons in 1870. The consumption amounted to 272,378 tons, against 242,954 tons in 1870, and the stock left was 132,422 tons, against 146,153 tons in 1870.

THE "FULTZ" WHEAT.

A new and very promising variety of wheat, called the "Fultz" wheat, is attracting considerable attention in Mifflin, Juniata, Lancaster, and neighboring counties in Pennsylvania. It is nearly smooth, with beards occasionally; is very evenly six-rowed; the straw stands well, the chaff very close and adherent; and it is claimed that it has never been affected by weevil; the grains are short and plump, and in color a light dull red or dark white. The Department of Agriculture has distributed a quantity of this wheat, and as the variety will be likely to receive an extended trial the coming year, its alleged history will prove interesting. It is stated that in the summer of 1862 Mr. Abm. Fultz, of Mifflin County, Pennsylvania, while harvesting some old Lancaster Red wheat, noticed three beautiful heads of smooth wheat. He took these heads home, and in the fall sowed the wheat on a spot where a brush-heap had been burned. The following summer he harvested half a pint. In 1864 his crop filled a basket, and in 1865 he had nineteen sheaves. Mr. Fultz then parted with a bushel of the wheat to Christian Detweiler, who sowed it along the northwestern side of an old orchard, where it was partly smothered by snow-drifts and shaded by apple trees. In the harvest of 1866 it was pronounced "scarcely worth sowing," but when thrashed it was found to yield better than the favorite Lancaster Red. Mr. Detweiler again tried it, and the next year, from about three acres of sandy land, he harvested 94 bushels of prime clean wheat; and the following year, from 13 bushels sown on nine acres, he harvested 300 bushels. The yield with other parties has been

30 to 35 bushels to the acre. The highest yield reported is by Mr. Emanuel Kauffman—180 bushels on four acres. This wheat makes an indifferent show above ground in the fall and early spring, but it makes up when harvest comes by its splendid straw, fine heads, and plump grains. The Department has already distributed all that it had at disposal.

AMERICAN POMOLOGICAL SOCIETY.

The thirteenth session of this society was held at Richmond, Virginia, on the 6th, 7th, and 8th of September. As it is eminently national in its character, its transactions are justly regarded with deep interest by pomologists and fruit-growers throughout the country. All of the prominent State pomological and horticultural societies are represented at its biennial meetings, and as the delegates participate in the discussions on fruits and other topics that are introduced, the proceedings are very important, and have a decided influence upon the extension of fruit-culture, as well as upon the value of the products of this source of national industry and wealth. One of the most valuable works that has occupied the attention of this society is that of preparing a list of fruits best adapted to each State. So marked is the influence of climate on certain kinds, that it has been found expedient to divide several of the States into sections or districts, to each of which several varieties are allotted.

Various circumstances having hitherto prevented the thorough completion of this catalogue, as representing the Southern States, the session just closed was mainly devoted to this purpose, and the list is now as complete as the nature of the subjects will admit. Yearly revisions of the catalogue will be necessary, as experience with older fruits over broader localities, and the introduction of new varieties, may suggest.

The organization of the American Pomological Society consists of a president, with a vice-president from each State and Territory; treasurer and secretary; a general fruit committee, composed of one member from each State; an executive committee; also committees on foreign fruits; synonymous and rejected fruits; new fruits; and revision of catalogue. The president is Marshall P. Wilder, of Boston; treasurer, Thos. P. James, Cambridge, Massachusetts; secretary, F. R. Elliott, Cleveland, Ohio. The next session of the society will be held at Boston, in 1873.

SALES OF SHORT-HORNS.

James N. Brown's sons, Grove Park farm, near Berlin, Illinois, sold August 9, 31 cows and heifers, and 11 bulls, Short-horns. The cows and heifers brought a total of $13,430; the bulls a total of $3,330. One of the cows, a barren animal, sold at $65; one bull, young, and not a sure getter, sold at $50. Setting these two aside, the cows averaged $445 50 each, and the bulls $333 each. The cows bringing highest prices were—Illustrious 3d, red roan, calved March 24, 1868, sold for $1,135; Maud Muller, roan, calved July 28, 1869, $1,025. The two bulls bringing highest prices were—Tycoon, roan, calved March 27, 1867, $865; Sir Frederick, red and white, calved December 6, 1870, $420.

The following is a statement of recent sales in Kentucky: J. M. Van

Meter, near Midway, June 27, 25 cows and heifers for $7,675, averaging $307 each; and 8 bulls for $1,535, averaging $191 88 each. The highest prices obtained for cows were—$1,025 for Mazurka 26th, three years ten months and a half old; and $455 for Lou Logan, eight years one month old; the bulls ranging from $100 to $450. Edwin G. Bedford, near Houston Station, June 29, 28 cows and heifers for $6,413, averaging $229 04 each, the highest price paid being $400; also, 10 bulls for $2,815, averaging $218 50 each, prices ranging from $130 to $435. The choicest animals of the herd were reserved. B. F. and A. Van Meter, near Winchester, June 30, 23 cows and heifers for $5,975, averaging $259 78 each, the highest price paid being $710; also, 14 bulls for $5,610, averaging $400 71 each, three of the animals bringing, respectively, $1,090, $1,060, and $1,000. Harvey W. Rice, near North Middletown, July 4, 20 cows and heifers for $7,012, averaging $350 60 each, the prices paid ranging from $115 to $755; also, 4 bulls for $1,282, averaging $320 50 each, prices ranging from $150 to $500.

The following is a statement of sales made at Winchester, Kentucky, August 26, of imported Short-horns, belonging to the Clark County Importing Company: Cows—Lady Pawlett, $900; Miranda, $975; Cowslip 2d, $1,300; Rose of Wicken, $850; Fatiko, $975; Gerty, $895; Dulcimer, $570; Lady Penrhyn, $710; Sweet Rose, $910; Pride of the West, $1,250; Patchouli 4th, $870; Rarity, $1,080; Rosette 5th, $900; Hartford Strawberry, $900; Red Princess, $800; Welcome, $700; Tiny, $600; Lady Spencer 2d, $1,220; Clochette, $855; Princess Maud, $330; average, $879 50. Bulls—Duke of Babraham, $790; Peabody, $900; Pioneer, $400; average, $696 67. There were also sold 28 head of pure-bred Short-horns, belonging to Lewis Hampton, and 10 head belonging to other members of the company. Names and prices of the animals are as follows:

Cows: Adelia, $430; Red Bell, $315; Beck Taylor, $600; Juniata, $280; Pearly, $210; Alida, $190; Red Rose, $300; Moss Rose, $300; Anna, $90; Bostona 2d, $105; Dora Dean, $230; Fragrance Filligree, $330; Snowflake, $140; Queen of Hearts, $550; Autumn Leaf, $165; Flora Temple, $150; Fannie Abram, $105; average, $264 12. Bulls: Duke of Greenwood 9,855, $350; Ben Thorndale, $80; Captain Gunter, $240; Crook-tail Lad, $260; Wellington, 9,292, $124; Christmas Eve, $135; Frank, $120; Rone Duke, $80; Butterfly Lad, $120; May Duke, $200; Pilot, $150; Dandy Duke 9,720, $165; Duke of Walberg, $185; Bismarck, $165; Sam Thorne, $190; Neptune, $80; Hamlet, $120; Ivanhoe, $225; Warwick, $100; Grand Duke, $150; Hero, $100; average, $159 05. The whole number of cows disposed of at these sales was 37; of bulls, 24. Total amount of sales, $27,510.

AGRICULTURAL CONDITION OF WESTERN AMERICA.

Perhaps the most important special work engaging the present attention of the statistical division is the collection of facts illustrating the industrial status of Western America, showing the progress of settlement and colonization, the yield and quality of agricultural production, the profit of the several branches of agricultural industry, the peculiarities of climate and soil, and the economic aspects of irrigation, tree-planting, and other specialties incident to rural improvement of the Great Plains, the Rocky Mountains, and the Pacific Coast.

The great want in this regard is accuracy. In addition to the inci-

dental facilities supplied by records of the official, scientific, and railroad explorations of the great region—which will only be used for purposes of comparison, verification, and illustration—our regular correspondents, as well as local officials and residents of enlarged information and accurate and unbiased judgment, will be employed, public addresses examined, and the records of current newspaper and book literature searched, for the material, which will be sifted, analyzed, and compared, and the compilation made by the statistician and others, after exploration and observation to the greatest practicable extent. The work will be difficult and laborious, and may not be concluded for the report of 1871, but its results, it is hoped, will find at least a partial record in the annual of the current year.

With reference to this work the statistician joined the agricultural editorial excursion party, (consisting of many of the principal agricultural editors of the country,) which left New York on the 18th of July, passing through Southern New York, Northwestern Pennsylvania, Ohio, Indiana, (diverging here to Southern Kentucky,) and Illinois to St. Louis; making another diversion, *via* the Atlantic and Pacific Railroad, to the rich agricultural and mineral lands of Southwestern Missouri and to the verdure-clad and cattle-teeming prairie of the Indian Territory; thence to the fruit-yielding bluff-lands of Missouri, the long vista of intermingled corn and grasses for two hundred miles of the Kansas Valley, and the plains stretching through four hundred miles of buffalo pasture to Denver. Nearly three weeks were then spent in Colorado and Wyoming in observation by railroad, by carriage, on horseback, and on foot, among the agricultural valleys of the mountainous mining sections, the elevated pasture-grounds of the South Park, the productive farm-lands of the Grand Divide which separates the waters of the Arkansas from those of the South Platte, the great cattle-herding plains of Laramie and the valley-lands of the Platte and its branches, for a distance of six hundred miles. Opportunity was afforded to investigate the methods and prove the success and comparative cheapness of irrigation in farm and garden culture, and also to witness the wonderful progress of agricultural colonization, on a coöperative and peculiar basis, as illustrated at Greeley, in Weld County, near the junction of the Cache-a-la-Poudre and the South Platte Rivers. The location, about twenty-five miles from the Snowy Range, in a valley which gathers the waters of the most reliable mountain streams of Colorado, is a good one; the population is rapidly increasing, as is the price of lands; the crops are generally good, remarkably so for the first year of cultivation and the inexperience of colonists in irrigation.

The tree-planting operations of Mr. R. S. Elliott, industrial agent of the Kansas Pacific Railroad, which embrace three locations on the arid plains, and include several varieties of deciduous and evergreen trees, have thus far been quite successful, without irrigation. A great variety of trees, including maple, walnut, ash, pine, larch, ailanthus, chestnut, and poplar, presented nearly as promising an appearance as similar plantations in Illinois. The experiment will be continued with a reasonable expectation of continued success.

LIVE STOCK IN IRELAND.

The registrar-general furnishes the following table of the number and value of horses, cattle, sheep, and pigs, in the several provinces of Ireland, in the years 1870 and 1871.

Provinces.		HORSES.		CATTLE.		SHEEP.		PIGS.		Total value of horses, cattle, sheep, and pigs.
		Number.	Value, at £8 each.	Number.	Value, at £6 10s. each.	Number.	Value, at 22s. each.	Number.	Value, at 25s. each.	
Leinster	1870	167, 865	£1, 342, 920	942, 766	£6, 127, 979	1, 405, 822	£1, 546, 404	353, 870	£442, 338	£9, 459, 641
	1871	166, 725	1, 333, 800	946, 300	6, 150, 950	1, 371, 367	1, 508, 504	392, 010	490, 012	9, 483, 266
Munster	1870	137, 453	1, 099, 624	1, 193, 384	7, 756, 996	1, 084, 638	1, 193, 102	542, 200	677, 750	10, 727, 472
	1871	139, 740	1, 117, 920	1, 228, 910	7, 987, 915	1, 022, 854	1, 125, 139	569, 773	712, 216	10, 943, 190
Ulster	1870	166, 005	1, 328, 040	1, 080, 237	7, 021, 541	541, 359	595, 495	345, 884	432, 355	9, 377, 431
	1871	168, 447	1, 347, 576	1, 158, 525	7, 530, 412	541, 436	595, 580	419, 383	524, 229	9, 997, 797
Connaught	1870	61, 334	490, 672	583, 525	3, 792, 912	1, 305, 065	1, 435, 571	219, 261	274, 076	5, 993, 231
	1871	62, 412	499, 296	636, 229	4, 135, 489	1, 302, 409	1, 432, 650	233, 024	291, 280	6, 358, 715
Total of Ireland	1870	532, 657	4, 261, 256	3, 799, 912	24, 699, 428	4, 336, 884	4, 770, 572	1, 461, 215	1, 826, 519	35, 557, 775
	1871	537, 324	4, 298, 592	3, 969, 964	25, 804, 766	4, 238, 066	4, 661, 873	1, 614, 190	2, 017, 737	36, 782, 968
Increase or decrease		*Increase.* 4, 667	*Increase.* £37, 336	*Increase.* 170, 052	*Increase.* £1, 105, 338	*Decrease.* 98, 818	*Decrease.* £108, 699	*Increase.* 152, 975	*Increase.* £191, 218	*Increase.* £1, 225, 193

The following table gives the number and value of live stock in Ireland in each year from 1861 to 1871, inclusive.

Years.	HORSES.		CATTLE.		SHEEP.		PIGS.		Total value in each year.
	Number.	Value, at £8 each.	Number.	Value, at £6 10s. each.	Number.	Value, at 22s. each.	Number.	Value, at 25s. each.	
1861	614, 232	£4, 913, 856	3, 471, 688	£22, 565, 972	3, 556, 050	£3, 911, 655	1, 102, 042	£1, 377, 552	£32, 769, 035
1862	602, 894	4, 823, 152	3, 254, 890	21, 156, 785	3, 456, 132	3, 801, 745	1, 154, 324	1, 442, 905	31, 224, 587
1863	579, 978	4, 639, 824	3, 144, 231	20, 437, 501	3, 308, 204	3, 639, 024	1, 067, 458	1, 334, 322	30, 050, 671
1864	562, 158	4, 497, 264	3, 262, 294	21, 204, 911	3, 366, 941	3, 703, 635	1, 058, 480	1, 323, 100	30, 728, 910
1865	548, 339	4, 386, 712	3, 497, 548	22, 734, 062	3, 694, 356	4, 063, 792	1, 305, 953	1, 632, 441	32, 817, 007
1866	535, 799	4, 286, 392	3, 746, 157	24, 350, 020	4, 274, 282	4, 701, 710	1, 497, 274	1, 871, 593	35, 209, 715
1867	524, 180	4, 193, 440	3, 707, 803	24, 100, 719	4, 835, 519	5, 319. 071	1, 235, 191	1, 543, 989	35, 157, 219
1868	524, 703	4, 197, 624	3, 646, 796	23, 704, 174	4, 901, 496	5, 391, 646	869, 578	1, 086, 972	34, 380, 416
1869	528, 201	4, 225, 608	3, 733, 675	24, 268, 888	4, 651, 195	5, 116, 314	1, 082, 224	1, 352, 780	34, 963, 590
1870	532, 657	4, 261, 256	3, 799, 912	24, 699, 428	4, 336, 884	4, 770, 572	1, 461, 215	1, 826, 519	35, 557, 775
1871	537, 324	4, 298, 592	3, 969, 964	25, 804, 766	4, 238, 066	4, 661, 873	1, 614, 190	2, 017, 737	36, 782, 968

FLAX CULTURE IN IRELAND.

The acreage in flax in the several provinces of Ireland in 1870 and 1871, together with the number of scutching-mills, is given by the registrar-general as follows:

	1870.	1871.	Decrease.	Scutching-mills.
Ulster	180,412	147,188	33,224	1,409
Munster	4,192	2,929	1,263	39
Leinster	4,238	3,199	1,039	39
Connaught	6,068	3,448	2,620	31
	194,910	156,764	38,146	1,518

The following table shows the total extent of flax grown in Ireland in each of the years named:

	Acres.		Acres.
1851	140,536	1862	150,070
1852	137,008	1863	214,099
1853	174,579	1864	301,693
1854	151,403	1865	251,433
1855	97,075	1866	263,507
1856	106,311	1867	253,257
1857	97,721	1868	206,483
1858	91,646	1869	229,252
1859	136,282	1870	194,910
1860	128,595	1871	156,764
1861	147,957		

ENTOMOLOGICAL RECORD.

THE COLORADO POTATO-BEETLE.—As much anxiety has lately been manifested in the Eastern States, in consequence of the rapid approach of the much-dreaded western Colorado potato-bug, or ten-lined spearman of Walsh, (*Doryphora decem-lineata*, Say,) and as several reports have lately been published as to its appearance in Massachusetts, Pennsylvania, and other States, and as, in many of the cases, totally different insects have been mistaken for it, it may be well to give a short account of the general appearance and habits of this insect, for the benefit of those farmers who have as yet, fortunately, had no opportunity of seeing it, or of learning anything about its general natural history. The *Doryphora decem-lineata*, Colorado, or western ten-lined potato-bug, was described by Say in the journal of the Academy of Natural Sciences, in 1823, as occurring in Missouri and Arkansas, and was so named from the ten black lines on its wing covers, five on each side. One of the first notices of its appearance, as a destructive insect, was in 1861, when Judge Edgerton described it as being very destructive to the potatoes in Iowa; and, in 1862, it was reported by Thomas Murphy, of Atchison, in Kansas, as doing much damage to the crops and being very numerous. The insect is said to have first fed on a species of wild potato, growing out in the far West, and is stated to have traveled east about three hundred and sixty miles in six years, or at a rate of about sixty miles a year. They are now said to be found as far north as Canada, as far east as Ohio, and, according to some papers, (but doubtful,) even in New York and Pennsylvania. In 1864 Mr.

Walsh calculated that, if not checked, they would reach the Atlantic States about the year 1880. The eggs, to the number of seven hundred to twelve hundred, are deposited on the young leaves of the potato. These eggs are attached by one end to the under side of the leaves, usually in clusters of one to two dozen. The larvæ hatch out in a few days, and feed from seventeen to twenty days. They then bury themselves in the earth, where they change into pupæ, and remain as pupæ from ten to twelve days, and finally emerge from the earth as perfect beetles to deposit more eggs for a second generation. In order to give some idea of their powers of multiplication and the injury effected by them, the Canadian Entomologist states that all their transformations are effected in fifty days, so that the result of a singe pair, if allowed to increase without molestation, would, in one season, amount to over sixty millions. And Mr. Walsh, after a careful examination of facts, states that in one year (1866) these insects had destroyed one and a quarter million dollars' worth of potatoes in one small portion of the United States which came under his observation. The insect, after laying its eggs, does not die immediately, Professor Daniels, of Wisconsin University, having kept a female alive six weeks without food after she had laid twelve hundred eggs. There are said to be three broods annually in Missouri and Illinois, the last brood remaining under ground all winter, and appearing as perfect beetles the following spring. This insect is stated to possess poisonous properties when incautiously handled; but the Canadian Entomologist has been unable to find any evidence of poisonous properties, and doubts the statement. It feeds upon the potato, tomato, egg-plant, thorn-apple, and black henbane, &c., &c.

There are several parasitical insects which destroy the Colorado potato-bug, but their numbers will not admit of their being enumerated in this article. Among the principal ones are several plant bugs, *Arma*, *Harpactor*, &c.; some beetles, *Lebia*, *Coccinella*, &c.; a two-winged fly, *Tachina*, besides several other insects which prey upon it in the larval state, and serve essentially to lessen the number of these pests. These insects should by all means be protected in the potato-fields and suffered to increase. The larva of the Colorado potato-bug is at first dark reddish-brown, but becomes paler, and brightens as it matures. The head is black, and it has a ring of black on the first segment of its body, and two rows of black spots on each side. The perfect insect is about half an inch in length, of a thick, oval shape, and of a yellowish cream color, with ten black lines running lengthwise down the wing-covers. The head and thorax are of an orange-brown color, spotted and marked with black. There is another insect closely resembling the true Colorado bug in form, coloration, and markings; this is called the *Doryphora juncta*, and may be distinguished by having the second and third stripes always united behind, and sometimes before, giving it the appearance of having only eight stripes instead of ten on the wing-covers. This insect has not yet been reported as having done any material injury to the potato, although in Alabama it has been said to injure the potato slightly, and is found in Maryland, Virginia, and South Carolina, feeding on the *Solanum carolinense*, and sometimes injures egg-plant in the South. A second insect, the three-lined potato-beetle, (*Lema trilineata*,) has also recently been mistaken for the Colorado bug, but may readily be recognized by its smaller size, more elongate form, and having only three longitudinal black lines on its reddish-yellow wing-covers. The larva may also readily be distinguished by its habit of carrying a disgusting mass of excrement on

its back, and by its smaller size. Some of the cantharides, (*Epicauta vittata* and *lemniscata* are also sometimes confounded with the Colorado beetle, by farmers, and, although they are striped in a similar manner on their wing-covers, they may be known by their much narrower and elongate form and narrow thorax. The Colorado bugs are partial to certain varieties of potatoes, such as the Mercer, Shaker, Pinkeye, &c., avoiding as much as possible the Peachblow, Early Rose, Peerless, and Chili, &c., when other varieties are to be obtained.

As a remedy, Professor Verrill recommends Paris green, mixed with eight to twelve parts of wheat flour, or with three parts of wood ashes, to be dusted over the plants when wet with dew; he, however, prudently adds, "It may be questioned whether it is safe or advisable to mix dangerous mineral poisons with the soil, for the arsenic and copper will remain in the earth, or may be absorbed by growing vegetables, or cause mischief in other ways." The American Entomologist also states that "Paris green (arsenite of copper) is a slow but dangerous poison; and when dusting plants with it the greatest care should be exercised, so that the wind may not carry it toward the person of the operator, and it may injure the soil if used repeatedly." In proof of this, peas planted at the Department of Agriculture, in soil mixed with Paris green rotted immediately and would not germinate, while those in unadulterated soil grew finely and flourished, but died immediately when transplanted into the soil mixed with Paris green. This dangerous remedy has already been used to such an extent that in an entomological paper it is stated that 1,200 pounds has been sold in one season at La Crosse, Wisconsin, for the destruction of these potato-bugs. Professor Cook, of Michigan Agricultural College, reports that some of their potato vines and egg-plants were totally ruined by a too free use of Paris green, mixed in the proportion of one part of the mineral to five parts of flour. Mr. H. H. McAfee, superintendent of the experimental farm of the University of Wisconsin, disapproves of the use of Paris green, on account of its poisonous properties, and recommends hand-picking and destroying the beetles when they first appear; he also states that the potatoes are often watery, rank, and of a bad flavor where the Paris green has been used. Mr. Riley says, "Watch for and destroy early beetles, and ensnare as many as you can by making small heaps of potatoes in the field planted; to these the beetles will be attracted for food, and may readily be killed in the morning." Paris green, (Scheele's green,) he states, if used too abundantly, will kill the vines, and recommends it to be used with six to twelve parts of flour, ashes, plaster, or slaked lime. He also says it is highly improbable that any substance sprinkled either on the vines or on the ground will ever accompany to the table a vegetable that develops under ground, or, in other words, that the arsenic cannot be absorbed by the plant, to render the root in some degree poisonous. The Canadian Entomologist also recommends Paris green, mixed with flour, ashes, or air-slaked lime, but states that flour is much the best when mixed in the proportion of one part of Paris green, by weight, to ten or twelve parts of flour, dusted over the plants when the dew is on the foliage, from an ordinary flour-dredge. Three pounds of Paris green to thirty or thirty-six parts of flour is sufficient for an acre of potatoes. It also states that it is not dangerous if carefully used.

Several substitutes for Paris green are also mentioned, among them arsenic itself, (arsenious acid,) which may be used in the proportion of one ounce to a pound of flour, but it should be colored black with charcoal or some other coloring matter, to lessen risk of accident from use.

Powdered cobalt, or fly poison, was also tested, but it is a much dearer remedy. Bluestone (sulphate of copper) solution injured neither bugs nor plant. Bichromate of potash, dissolved in water, killed insects and plants. Powdered hellebore had a perceptible effect. Carbolate of lime varies much in composition and character; some of it was partially successful with the larvæ, but doubtful with the perfect insect. Ashes and air-slaked lime gave no perceptible results.

In summing up all the evidence on the subject of remedies, it appears that hand-picking, especially very early in the season, when the insects first appear, and before they have had time to lay their eggs, is highly advantageous, and that the use of Paris green is recommended by the best authorities; but that, when using this dangerous poison, the greatest care should be taken when dusting the plants that none of it is carried by the wind on the person of the operator, or on any neighbor's fruit, vegetables, or forage crops, and that it should be mixed with at least ten to twelve parts of flour, plaster, or some other material, and that an overdose is apt to kill the plants, besides leaving a residuum in the soil which may prove injurious to the crops.

INSECT DEPREDATIONS.—THE CHINCH-BUG.—A correspondent of the Missouri Republican writes that, after trying other ways to prevent the chinch-bugs going through his corn, he tried salt, and found that it will effectually stop them. Take a pail of water and half a gallon of salt, stir well, then with a small broom or bunch of feathers sprinkle well a row of corn just ahead of the bugs, taking care that the ground between the hills of corn in said row is well sprinkled with the brine. Three pails of brine will sprinkle a quarter of a mile, if properly applied, and will stop the bugs, if well done. The bugs generally commence on a corn-field at one side and go through from row to row with almost as much precision as the plowman in plowing the corn.

RAVAGES OF GRASSHOPPERS.—These pests have been numerous and destructive during the past month in some portions of the Eastern States. In Sagadahoc County, Maine, the crops and pastures were injured by them very much; also in Hancock County. In Franklin many fields of grain were cut to save the crops from them and for feeding. In Oxford oats were "eaten entirely down, as clean as though fed upon by sheep." In some portions of Plymouth County, Massachusetts, they are reported to have eaten everything green. In Caledonia County, Vermont, they have been very destructive. All through Windsor they have been "a terrible scourge." In Orleans they are reported abundant, and in Windham they have done "much injury to some of the crops." In Wayne County, Pennsylvania, also, they are reported to have done much damage.

Reports from San Bernardino, California, state that grasshoppers in "brigades" are moving from San Gorgonio to the sea, destroying everything eatable on their line of march. These insects are said to be of extraordinary size and voracity.

THRIPS ON ONIONS.—The Massachusetts Ploughman learns that the genuine wheat-thrip has this season attacked the onion crop on one or two farms in Swampscot, carrying all before them and making a clean sweep. This is something new, if accurate, as there is great difference between the wheat plant and the onion.

YELLOW-JACKETS.—A correspondent of the Department, writing from Brookhaven, Mississippi, gives the following method of destroying yellow-jackets, *Vespa vulgaris:* "Into four ounces of water put

three ounces of cyanide of potassium; and of this solution pour two or three or four table-spoonfuls in and around the holes of the pests. Its contact appears to paralyze the insects, and they soon die. If the first application does not finish them, another one will. The nests can then be dug out and burned. Great care should be observed in handling the remedy, as it is poisonous." We believe the use of benzine would prove to be an equally efficacious remedy.

THE DECAY OF FOREST PINES.—A correspondent in Mississippi writes that, within a radius of five miles of his residence, many forest pine-trees have died this year from an unknown cause. Four clusters are entirely dead, three of which will average twenty trees each. In another and a larger cluster, seventy-five trees are dead. A small bark and wood eating insect, either a *Tomicus* or *Scolytus*, is probably the cause of the death of the trees. It would be well to examine the bark of a tree after its vitality has been destroyed, and if insects are found under its bark, the whole tree should be burned. By thus destroying the insects, other trees would probably escape injury.

SCIENTIFIC NOTES.

USE OF WATER-GLASS IN WASHING WOOL.—Among the many practical applications of water-glass, or the silicate of potash and soda, its use in the washing of wool is said to be not the least important. For this purpose one part of the water-glass is to be dissolved in forty of warm water, and the wool placed in it for a minute, and stirred around a little with the hand. It is then to be taken out and rinsed in cold or lukewarm water, when it will be white and entirely free from smell. After this treatment the wool is said to remain perfectly soft, and is not affected in the slightest degree, even if allowed to remain for several days in the solution, and then rinsed out with warm water. Wool may be washed very rapidly in this way, and in large quantity, by inclosing it in baskets or nets, immersing it in the solution, and treating it as above mentioned. Even the sheep can be rendered of snowy whiteness very quickly, if immersed for a minute in a vessel containing the above solution at a temperature of 100° to 120°, and then rinsed in pure water. In this case it may be necessary to take some precaution to prevent the introduction of the solution into the eye of the sheep, which may be done by fastening the legs securely to prevent struggling, and, perhaps, enveloping the head for the time in cloth.

A similar use of the water-glass is recommended for the ordinary washing of clothes, the process consisting in laying the fabrics in a solution of one part of glass and twenty to thirty of water at a temperature of 100° to 150° F., and allowing them to stand several hours, when they are to be stirred around with a stick, the bath having been previously heated up by the addition of warm water. The clothes are then laid upon a board or over bars to drain, when the liquid coming from them will be found to contain nearly all the dirt. After this, treatment in the ordinary way, with a very little soap, will quickly remove any remaining impurity. It is recommended to place the clothes a second time in a weak solution of water-glass—one part in fifty—and finally to rinse out with warm water. Clothes thus treated, it is said, become of a dazzling white, and do not need bleaching.

PREPARATION OF DESICCATED VEGETABLES.—A convenient method of preparing desiccated vegetables, as practiced largely in some countries, consists in drying them for a short time and then exposing them to a slow heat in ovens. When soaked for cooking, peas, roots, potatoes, beets, corn, and other substances, swell out and show very little change in their esculent properties. A modification of the process consists in placing the substances, after being sun-dried, in paper bags, which are pasted up at the mouth, and then covered with sand and heated until perfectly crisp, but not burned nor materially changed in color.

ECONOMY OF LONG FURROWS IN PLOWING.—A German agricultural journal observes that farmers usually pay very little attention to the length of the furrows to be plowed in a field, and yet great waste of time and labor is the necessary consequence of unsuitable arrangements in this respect. The turning of the plow and the commencing of a new furrow requires more exertion in the plowman and the team than continued work on a straight line, and how great may really be the loss of time from frequent interruptions in short turns may be shown by the following calculation: In a field 225 feet long, five and a half hours out of ten are used in redirecting the plow; with a length of 575 feet, four hours are sufficient for the purpose, and when the plow can proceed without interruption for 800 feet, only one and a half hours of the daily working time are consumed. Hence the rule to make the furrows as long as circumstances will admit.

PASTEUR'S MODE OF PREPARING VINEGAR.—The researches of Pasteur, in regard to the microscopic growths that affect the silk-worm, the vine, wine, &c., are well known to many of our readers; but they may not be so familiar with one of his many important practical applications of science to the economical manufacture of an excellent quality of vinegar. His method has been practiced in an extensive establishment in Orleans, France, for some time past, under his direction, although it is but recently that the details of the process have been made known. The apparatus employed consists of as many tubs, holding about thirty gallons each, as can conveniently be accommodated in one room, kept heated to a temperature of 70° to 80°. These are filled with a mixture of vinegar and wine, and the vinegar fungus is planted, or sown, upon the surface. This is an application of the fact, established by Pasteur, that the conversion of wine into vinegar is caused by the development in the liquid of the so-called vinegar fungus, or *Mycoderma aceti*. This planting, or sowing, is accomplished by the use of thin wooden spatulas, previously moistened to prevent adhesion, and then laid on the liquid covered by the fungus, so as to take off a thin layer, and afterward immersing this carefully in the unchanged liquid, and stirring round so as to carry the fungus to the bottom. This soon rises to the surface, which is completely covered by it in about eighteen hours. With the development of the plant the manufacture begins, accompanied by a considerably concomitant development of heat. In the course of nine or ten days, and sometimes in eight, the entire liquid is transformed into vinegar, the completion of the operation being shown by the tearing apart of the fungus layer, and its falling to the bottom. The vinegar, which by this time has become cold, is drawn off through an opening near the bottom of the tub; ninety-five parts of vinegar being obtainable from one hundred parts of the wine. When the vinegar is drawn off the tubs are to be well scrubbed out with clean water, so as to be entirely free from all particles of fungus; they are then ready for a new mixture of wine and vinegar. The advantage of this method consists in its simplicity and

in the ease with which the work can be prosecuted; the first results being obtained in ten days, and the whole completed in twelve or fourteen. In the old methods, it was necessary to add a very large proportion of vinegar to the wine in order to transform a small quantity of the latter, so that from one tub of one hundred quarts only nine quarts of vinegar were furnished weekly; while by the new method nine and a half quarts can be furnished daily, or sixty-six in a week, being seven times as much as by the old method. In consequence of the more rapid preparation by the new process, the vinegar is less aromatic when completed, but very soon acquires this important quality.

ADULTERATION OF WOOL.—An additional illustration of the modern tendency to adulterate articles of commerce, (in this instance, fortunately, the result not being injurious to health,) we find in an advertisement in a recent German journal offering to sell the secret of a process by which wool, in the yarn or the fabric, can be made to weigh from 10 to 25 per cent. more than originally, according to the color desired, and without injury to the fiber or affecting the most delicate colors, or the physical character of the article in the slightest degree.

PROTECTING GRAIN FIELDS FROM CROWS.—An effective method of preventing the devastation, by crows, of fields that have been recently planted with grain, is said to consist in stretching cords, longitudinally and transversely, upon stakes, about a foot above the earth, and about ten paces apart.

ADULTERATION OF CLOVER-SEED.—A confidential circular from an enterprising German in Hamburg has lately come to light containing an offer to sell several tons of sand suitable for mixture with clover seed, the grains of which resemble the seed so closely that it is almost impossible to distinguish them by the eye. The writer of this circular announces that this sand is in great demand, especially in England, for purposes of adulteration. Two colors are supplied, one for red clover and one for white.

NITROGEN IN MULBERRY LEAVES.—Some important investigations were prosecuted, not long since, by Dr. Reichenbach upon the chemical composition of the leaves of the mulberry in connection with the silk-worm disease, in the course of which he ascertained that such leaves, as grown in Europe generally, had a much less percentage of nitrogenous matter than those of China and Japan. He has lately continued his inquiries by an analysis of leaves from Turkistan, and has found in these an unusual percentage of nitrogen, varying from 3.35 to 4.05 per cent. in the dry leaf.

In some accompanying remarks upon this paper by Liebig, stress is laid upon the importance of such investigations in determining *a priori* the value of different qualities of leaves for raising silk-worms, and it is stated that where nitrogen is deficient, the silk-worm suffers in its general health, and consequently in its ability to produce a healthy and abundant silk cocoon. The cause of the paucity of nitrogen in the European leaves is believed to be the result of long continued cultivation of the tree in the same soil, and especially the use of leaves from trees that have attained their full size. In a growing plant, as the roots are perpetually pushing out into new and unexhausted soil, the proper supply of nourishment is obtained; but the moment a complete development of the tree is accomplished a diminution of nitrogen in the leaves commences, with the results indicated; so much so that a

yield of even 2½ to 3 per cent. of nitrogen from the dry leaves is not common.

TANNIN IN THE MANUFACTURE OF BEER.—We have already referred to the increasing use of tannin as obtained from the grape, in the treatment of wine, for the special object of arresting fermentation and preventing change beyond a desired point. A similar application is now made with much success in the preparation of beer; and the result, according to critical authority, has been to establish a new epoch in this manufacture. It is to the presence of tannin in the leaves of the hop that its preservative peculiarities are due; and in the tannin of the nut-gall we have the same agent in greater intensity, 75 grains of tannin exerting as positive an action upon beer as a pound of the best hops. By taking tannin dissolved in ten times its weight of warm water and adding it to the wort, a complete clarification will take place, and on cooling a deposit will be thrown down. In all cases where the peculiar aroma and bitter substance of hops are not desired, but a sweet wine or beer is to be produced, the hops can always be replaced completely and with advantage by the tannin. The use of this new material allows the manufacture of several new kinds of beer, and obviates the necessity of using any other modes of clarifying.

MANGANESE IN BEECH-NUTS.—It has lately been ascertained, in corroboration of experiments made some years ago, but to which little importance was attached, that beech-nuts contain a large percentage of manganese, although the soil in which they are grown may exhibit no appreciable trace of this metal.

SUBSTANCES AFFECTING THE GERMINATION OF SEEDS.—According to a late paper by Dr. Vogel, upon the influence of various substances on the germination of seeds, it is stated that among those most injurious in this respect are dilute acetic acid, and carbolic acid, although the substances in question are present in very small percentage. Solutions of hydrocyanic acid, arsenic, phosphorus, &c., were found to be much less injurious in the same proportion than those first mentioned. This explains the unsatisfactory nature of experiments for the destruction of insects on plants by means of solutions of carbolic acid; the insects, it is true, being killed by a very weak solution, while at the same time the plants themselves rarely survive.

INFLUENCE OF CONDITIONS OF HEAT ON THE GROWTH OF PLANTS.—A paper has lately been published by Köppen, upon the relationship of conditions of heat to the phenomena of growth in plants; his first inquiry being limited to the questions connected with the germination of the seed. The general conclusion arrived at was that variations of temperature were in all cases prejudicial to the growth of the germ, even when amounting to but a few degrees, and these within limits favorable to energetic growth. That is to say, the germination proceeds more rapidly at a low temperature of a uniform degree, than at a higher, where subjected to more or less variation. From this we derive the inference that a nearly uniform spring temperature, with a cloudy sky, is more favorable to rapid development of vegetation than the alternation of hot days and cool nights, it being of course understood that the mean temperature in each case is about the same.

INK-PLANT OF NEW GRANADA.—Among vegetable substances useful in the arts is one that has long been known in New Granada under the name of the ink-plant, as furnishing a juice which can be used in writing

without previous preparation. Characters traced with this substance have a reddish color at first, which turns to a deep black in a few hours. This juice is said to be really less liable to thicken than ordinary ink, and not to corrode steel pens. It resists the action of water, and is practically indelible. The plant is known as *Coryaria thymifolia*.

MURRAY ON BLIGHT IN PLANTS.—At a recent meeting of the scientific committee of the Horticultural Society of London, Mr. Andrew Murray read a paper on the blight of plants, in which he combated the ordinary theory that the lower forms of vegetable organisms, which constitute ordinary blight, are developed from germs existing in the plant, or floating in the air.

ACTION OF ELECTRICITY ON THE COLORED TISSUES ON VEGETABLES.—In a recent memoir by M. Becquerel, the elder, upon the action of electricity upon the colored tissues of vegetables, he remarks that electrical discharges, whether strong or weak, produce three distinct actions upon the colors of the leaves of plants and the flower: First, that by virtue of which the parts electrized allow the coloring matters, which are in a state of solution in the cellules, to be absorbed, or rather filtered, in cold water, in which they are plunged after electrization. This effect takes place principally with red and blue colors; while the yellow shades, due to the solid granules situated in the cellules, do not appear to be modified. Second, a direct decolorizing action upon red and blue coloring matters, which are found in a liquid state in the cellules whenever the electrization of the plant is sufficiently prolonged, this effect being sometimes very rapid. Third, infiltration, so to speak, or a transfer of coloring matter sensible to the preceding influences, and that found in the interior of the electrized organs. An example is seen in the effect produced in the red, found in the under surface of leaves of the *Begonia discolor*, its color, during the electrization of the leaf, becoming gradually infiltrated towards the upper green surface, so as to mask the color of the chlorophyl. He further remarks, that the atmosphere and the earth are constantly in two dissimilar electrical conditions; the first possessing an excess of positive electricity; the second, of negative; these two excesses becoming neutralized by means of the conducting substances found at the surface of the earth, plants especially.

OIL FROM BIRDS.—Our readers may be surprised to learn that the oil obtained from several distinct species of birds possesses a decided economical value, and that various sorts are recognized as articles of trade in different parts of the world. In our own domestic medicine goose-grease is known as an emollient, and for other purposes. The penguins, petrels, mutton-birds, frigate-birds, Mother Cary's chickens, &c., all ocean forms, are sometimes killed, in immense numbers, for their oil, and to such an extent is the destruction of penguins carried, in this connection, that while the fat of eleven penguins is required to furnish a gallon of oil, a single vessel has been known to bring back, after a six weeks' campaign, twenty-five to thirty thousand gallons, representing, of course, over ten times that number of birds. This is taken to London and used almost exclusively in currying leather. Ostrich fat has much reputation in Africa as a remedy for rheumatism, and is greatly sought after by the Arabs for this purpose. The Emu, or Australian ostrich, is hunted very much for a similar purpose. A single bird will produce six or seven quarts of a beautiful, bright yellow oil.

In South America a species of goat-sucker, known as guacharo, (*Steatornis caripensis*,) and remarkable for its excessive fatness, is hunted in

large numbers by the Indians, the young birds especially. This species differs from the ordinary goat-sucker in being almost exclusively a vegetable-feeder, the result of which is the deposit of a large quantity of fat under the skin. The oil is half liquid, transparent, and so pure that it will keep more than a year without becoming rancid. In many parts of North America the fat of the wild pigeon is said to be collected by the Indians, both as an oil for light and as a substitute for butter. Very recently a trade has sprung up in the Gulf States in oil obtained from the American pelican, which, we learn, is actually quoted in the market of New Orleans at about a dollar and a half per gallon. A fleet of small vessels is occupied in following up these birds in their different haunts, and killing them, although the process by which the oil is extracted is not indicated; nor is the reason given why the value of the product should be so great, compared with that of nearly all the other animal oils in market. It is much to be regretted that this new mode of extermination of our coast birds should have been initiated; and it may well be asked whether it is not the duty of the proper authorities to pass stringent laws prohibiting this practice.

New disease of the coffee-plant.—According to M. J. Berkley, a disease has lately appeared in the coffee plantations of Ceylon which threatens to become of serious import. The albumen of the berry is developed sufficiently to present the usual convoluted appearance, but the growth appears to be suddenly arrested. As a result, the substance is not sufficiently solidified, and consequently it contracts and acquires a dusky tinge, in some cases becoming black. No indications of fungi were observed by Mr. Berkley. The disease has been attributed to sudden changes of weather, and it is thought to be possibly of no more than local development.

New milk-producing tree.—A new milk-producing tree in the Valley of the Amazon has lately been brought to the notice of Europeans. It is known as the *Massaranduba*, and appears to be a species of *Mimusops*, of the natural order *Sapotaceæ*. The wood is valuable, and used for various purposes, and the milk flows freely from the trunk upon incision, but hardens on exposure to the air, and then has an elastic property similar to that of gutta-percha. This juice is used as food when fresh, but never in its pure state, being either mixed with a small quantity of water, or with coffee or tea like ordinary milk.

Tremellat process for preserving grapes.—A recent process for preserving grapes through the winter, introduced by M. Tremellat, of Marseilles, is commended in agricultural journals as answering its purpose better than many of the improved methods of the day. This depends upon the fact that, in the ordinary storage of grapes, a portion of the water, both of the stem and of the berry, is lost by evaporation, so that they dry up unless moisture is restored to them. To obviate this difficulty the bunches are cut in such a manner as to leave a considerable portion of the adjacent woody part of the vine, and are then suspended over a vessel filled with water, so that while only hanging near the surface of the water the ends of the stems are immersed. As the moisture evaporates from the grapes it is restored by capillary absorption through the stem, and no change takes place. By means of the arrangement thus indicated M. Tremellat has succeeded in keeping grapes from one year over into another, fresh and fair as in the moment of gathering, and his method is now used on a large scale in Paris and elsewhere.

CHARLIER HORSESHOE.—A new horseshoe introduced in Paris by M. Charlier has been favorably received. It consists of a narrow rim of iron, thoroughly protecting the edge of the hoof without cramping its sole in the least. The material to be used must be of the best quality, but the weight being considerably less, the cost is not increased. Thousands of horses of the many public conveyances in Paris have been provided with these shoes, and they give general satisfaction.

THE EUROPEAN PLANE-TREE IN CITIES.—No tree resists so well the smoke and impure air of European cities as the plane, (*Platanus occidentalis*,) although it is not a native of that continent. It is the tree most generally seen in the churchyards, squares, and other open spaces in London, thriving well, and living to a considerable age. This is probably in part due to the fact of the outer layer of bark being shed yearly, and thus not becoming choked with smoke so that its functions are destroyed. The rows of young plane-trees planted along the recently opened portion of the Thames embankment, from the Houses of Parliament to Charing Cross and the Temple, are growing vigorously, and promise in a few years to afford a grateful shade, and to add much to the beauty of the banks of the river.

REPORT ON THE POTATO DISEASE.—The Prussian Agricultural Academy has been occupied since 1863 in making laborious investigations into the mode of propagation and possible prevention of the potato disease. A report of operations has recently been published, from which it appears that the following points, among others, may be considered as finally determined: First. A relationship and connection between the disease of the leaf and of the tuber, and the fact that the potato-fungus is the cause of the wet-rot of the potato. Second. The wintering of the mycelium of the fungus in the diseased tubers is considered well established and as needing no further verification. The mode of dissemination of the disease, however, is considered as requiring additional investigation, including the development of the mycelium of the infected tubers in the superficial portion of the young plant, as well as the formation of the leaf fungus. The inquiry is suggested also whether the first traces of the leaf disease in the summer come from the mycelium of the infected seed-potatoes of the previous year. Experiments are also proposed for ascertaining whether, if the young plants are completely protected from the entrance of fungus-spores from the exterior, a diseased mother bulb would produce diseased plants. The effort to find some convenient mode of disinfection of seed-potatoes for the purpose of preventing the disease has not, so far, met with any satisfactory result. It is possible, of course, to destroy the mycelium of the fungus in the tuber by various means; but this generally injures the bud at the same time and prevents its growth.

One very important feature accomplished by these inquiries is the ascertaining that different varieties of potatoes vary extremely in their susceptibility to disease, some kinds being much easier of infection than others. It is suggested that the collateral inquiry be carried out for the determination of the best varieties of potatoes which enjoy a greater or less immunity from attack. What it is, in the plant or tuber, that causes this condition is not yet ascertained, and it is thought that possibly when the cause is known the more sensitive varieties may be so modified as to have an equal advantage. According to some the difference consists in the degree of smoothness of the external skin of the potato, while others maintain that it depends upon the thickness of the skin.

SPECIFIC GRAVITY TEST FOR POTATOES.—It is generally understood that the value of potatoes depends upon their specific gravity, and that the heavier the potato the greater the amount of nitrogenous matter it contains. This has suggested the idea of a convenient test by which the excellence of different varieties can be readily determined, and which consists in the use of saline solutions of different degrees of strength. If, assuming one variety as a standard, we make a solution of such strength that the potato will float at about the middle of the mass, neither falling to the botton nor rising to the surface, and apply the same test to other potatoes, we may conclude that if one fall to the bottom it is better, or if it rise to the top it is poorer, than the standard. A series of standards has been suggested, therefore, by Dr. Neslee, of definite percentages of salt and water, thus producing a sliding scale applicable under any circumstances for the test in question.

POISON FROM THE SHADE OF THE MANZANILLA.—Mr. Karsten has lately published the detail of observations made upon himself, in reference to poison by exposure to the shade of the manzanilla tree, (*Hippomanis manzanilla.*) After remaining several hours under the tree, he experienced a burning sensation over the entire surface of his body, which at length centered in certain parts of the skin, especially about the face, and above all around the eyes. After a time the eyes were swelled so as to be almost closed, and were so sensitive that for several days he found it necessary to remain in a perfectly-darkened room, being also in great pain. After three days the swelling diminished, and the epidermis began to peel off. These symptoms he supposed to be the result of poisonous exhalations from the tree, a peculiarity which is shared with the manzanilla in South America by several other species of plants. An analogue of these deleterious exhalations may be seen in certain volatile organic bases, such as trimethylamin; and it is suggested that similar nitrogenous combinations may have a much wider distribution than has hitherto been suspected.

FACTS FROM VARIOUS SOURCES.

EXPERIMENTS WITH WHEAT.—Mr. J. I. Carter, superintendent, reports the results of experiments with sixty-nine varieties of wheat at the Eastern Experimental Farm, Chester County, Pennsylvania. Most of the varieties have done well, free from smut, rust, or blight to any great extent. The time of cutting, the weight of straw, and the yield of grain per acre are given as follows:

Quality.	Whencut.	Straw.	Wheat.	Quality.	Whencut.	Straw.	Wheat.
		Pounds.	*Bushels.*			*Pounds.*	*Bushels.*
S. White Blue Stem	June 22	3,348	19.73	B. Week's White	June 28	3,366	32.40
S. Diehl	June 28	2,848	21.86	S. & B. Rough & Ready.	June 28	3,504	32.26
S. B. White Touzelle, (last year's product.)	June 28	3,600	26.13	B. Brittany	June 28	3,696	32.00
S. B. White Touzelle, (recent importation.)	June 28	3,600	26.93	B. Light Red Chaff Mediterranean Amber.	June 28	3,344	31.20
				S. Early Georgia	June 24	2,640	18.66
B. Mountain	June 28	2,848	24.53	B. Red Bearded Suissette	June 28	3,504	25.86
B. Polish	June 28	3,376	14.13	S. Arnold No. 1 ...do...	June 28	3,424	26.13
B. Jennings	June 24	2,876	23.53	S. Arnold No. 2 ...do...	June 28	2,752	26.66
S. Talavera	July 5	2,928	17.06	S. Arnold No. 3 ...do...	June 28	3,008	23.46
S. Rough Chaff	July 5	2,904	15.20	S. Arnold No. 4 ...do...	June 28	2,784	26.13
S. Model White	June 28	2,504	18.26	S. Arnold No. 5 ...do...	June 28	3,392	25.60
S. Tappahannock	June 24	3,152	21.86	S. Arnold No. 6 ...do...	June 28	3,552	22.93
S. Rogers's	June 28	3,844	37.80	S. Arnold No. 7 ...do...	June 28	3,552	25.08

Quality.	Whencut.	Straw.	Wheat.	Quality.	Whencut.	Straw.	Wheat.
		Pounds.	*Bushels.*			*Pounds.*	*Bushels.*
S. Arnold No. 8 Suissette	June 28	3,328	26.66	B. Old White Chaff Mediterranean.	June 28	4,704	37.86
S. Arnold No. 9 ... do ...	June 28	3,228	22.43	S. and B. Treadwell...	June 28	3,760	29.86
B. Baard, (Cape of Good Hope.)	June 28	1,936	15.70	B. Russian Amber	June 28	3,428	30.86
S. Du Loits, (Cape of Good Hope.)	June 24	2,000	15.73	B. Rue's Amber.....	June 24	2,736	26.66
S. French Wheat, (introduced into Cape Colony in 1860.)	June 28	2,464	15.46	B. Prolific Amber	June 24	2,640	27.46
B. Black Ear, (Cape of Good Hope.)	June 28	976	560	S. German Amber	June 24	2,528	21.06
S. White Surrey, (Cape of Good Hope.)	July 5	2,952	11.61	B. French Red Chaff ..	June 28	2,924	23.66
B. Golden Ball, (Cape of Good Hope.)	June 28	2,424	20.40	S. Hungarian Red.....	July 5	2,128	16.80
B. Knopjes or Liebrits, (Cape of Good Hope.)	June 28	3,072	9.60	S. Berdenska Red	June 28	3,456	11.73
B. Strydoms, (Cape of Good Hope.)	June 28	2,592	16.00	B. American White...	June 28	2,656	19.73
S. Brink's, (Cape of Good Hope.)	June 24	1,152	4.80	B. Shade Mountain White.	June 28	2,896	21.06
B. Bengal White, (Cape of Good Hope.)	June 28	1,536	8.00	S. Orceina.....	June 28	1,712	12.00
B. White Australian...	June 28	2,896	18.80	S. Salla Red.....	July 5	2,032	9.86
S. Italian Red	June 28	4,240	27.46	S. California White ...	June 28	2,192	21.06
B. French White Chaff Mediterranean.	June 28	3,952	33.33	S. Italian White	June 28	2,288	19.46
B. Parker's Italian.....	June 24	3,792	34.66	B. Old Red Chaff Mediterranean.	June 28	2,752	23.46
S. and B. Witter	June 28	3,792	36.53	B. Lancaster Red	June 28	2,672	23.73
B. White Chaff Mediterranean, (recent importation.)	June 28	4,536	36.13	B. Ancona Red.....	June 28	2,336	20.80
				B. Bohemia Red.....	July 5	2,304	13.26
				B. Sakonka Red.....	June 28	2,992	16.26
				B. Rochester Red	June 28	3,024	24.26
				S. Extra Early Jersey.	June 24	2,688	19.20
				B. Michigan Amber...	June 28	2,976	22.66
				B. Sandomirca White..	July 5	3,344	12.53
				B. Potts	July 3	.....	20.00
				B. Lancaster Early....	July 3	.....	22.80

NOTE.—S. smooth; B. bearded; S. B. short beards; S. and B. both smooth and bearded heads.

EXCELSIOR OATS.—Mr. S. S. Fenn, of Nez Percés County, Idaho, received from this Department, in the spring of 1869, two and a half pounds of the Excelsior oats. He sowed the seed about the 1st of June, and harvested 179 pounds. This product was sown the following year, and produced 194½ bushels, weighing 49 pounds per bushel. The land was irrigated and otherwise prepared with great care.

In another case one acre was sown with the Excelsior oats about the last of May, 1870, and 79½ bushels, of 49 pounds each, were harvested. This crop was raised on high and dry ground, without irrigation. The straw was bright and strong, and averaged 4 feet above ground. The common varieties of oats cultivated in that region average only 60 bushels, weighing 34 pounds each, and were considered an excellent crop when raised without irrigation. Other attempts at the cultivation of these oats in this region have met with flattering results.

OLIVE CULTURE IN GEORGIA.—Mr. P. M. Nightingale, of Brunswick, Georgia, writes us his observations and experience in the culture of the olive, and the manufacture of olive oil, as follows:

I have successfully cultivated the olive on Cumberland Island, my former place of residence, and before the war I made a very superior quality of sweet-oil, pronounced by very good judges to be quite equal, if not superior, to the best that has been imported. The olive grows with little care and great rapidity on Cumberland Island, and it is the impression of all who have seen the grove on that island, that the trees compare very favorably in point of size with those in Europe. They bear nearly every year, and produce two to three bushels of fruit to the tree. Each bushel of olives will yield one to two gallons of oil. I also succeeded in pickling the olives, but not to my entire satisfaction. This process is more difficult, and requires more care and judgment than extracting and preparing the oil. The fruit must be in exactly the right state for pickling. If that stage is passed, the pickles, though very nice at first, will not keep. If, on the contrary, the fruit is gathered for this process before it is sufficiently matured, it becomes hard and tasteless. The olive tree is easily propagated from cuttings, layers or shorts, or by ingrafting into the root. It begins to bear in about six years, but does not produce abundantly until it is ten or twelve years old. When matured it is larger than the largest apple tree. The oldest trees on Cumber-

land Island were planted by Mrs. Greene, the widow of General Nathaniel Greene, in 1793, and they are still fine vigorous trees, and may live a century longer. They are not subject to the devastations of the insect which has seriously injured the orange trees in Southern Georgia and in Florida for thirty years past. Mrs. Greene commenced the cultivation of the olive on Cumberland Island at the special recommendation of Mr. Jefferson.

LOTUS AND THE VINE IN MICHIGAN.—Mr. Thomas Whelpley, of Monroe, Michigan, writes to the Department as follows:

The *Nelumbeum luteum*, or lotus of Asia, that I reported to the Smithsonian Institution in 1851 as existing in our bayous, though scarce and feeble, has since that time been rapidly spreading and increasing in vigor and proportions, until now we have hundreds of acres of our marshes and bayous occupied by it in solid masses, overriding and displacing all other water vegetation in its way. They turn out corollas 12 inches, toruses 6 inches, and leaves 30 inches in diameter, as a common thing. Some toruses mature 30 to 35 nuts, large and sweet as filberts, indicating an extraordinary mildness of climate for so high a latitude. (See Agricultural Report, 1861, p. 171.)

The mouth of the river Raisin this day rivals the famous Rhine, in Germany, in richness and luxuriance of vintage. The six miles square, including the city of Monroe, turned out last year 16,000 gallons of wine that is actually displacing the German Rhine wine in our midst, and the vintage of this year promises to double that of last.

SIXTY-NINE BUSHELS TO THE ACRE.—The San Joaquin Republican is informed that 58 acres of wheat on Sherman Island has this year produced 4,000 bushels of grain—very nearly 69 bushels to the acre. The same authority reports a yield of 6 tons of hay to the *acre* on the island. This island is reclaimed tule land. The American Rural Home, Rochester, New York, reports a yield of a trifle over 40 bushels per acre of the Diehl wheat, on between eight and nine acres in Monroe County. The soil on this farm is largely clay, deep and fertile. The owner seldom plows less than 12 inches in depth, using a strong team and a large Wiard plow. The furrows are leveled with a harrow, and the soil is then thoroughly disintegrated with a wheel-cultivator with teeth 15 inches long and drawn by four horses. The seed-bed is worked 12 inches deep; then it rests awhile and settles, and the seed is drilled in. James H. Graham, of Mason, Michigan, reports a yield of 35¼ bushels per acre on a field of five acres; and Mr. C. T. Beck, of Monroe, 37 bushels 6 quarts per acre on a field of 5¼ acres. Mr. Joseph E. Roberts, of Burlington County, New Jersey, reports a yield of 412 bushels on 13 acres—over 31⅔ bushels per acre. Several crops of over 30 bushels to the acre are reported from the same neighborhood.

PREMIUMS FOR COTTON.—In connection with the fair of the St. Louis Agricultural and Mechanical Association, to be held in that city for one week from October 2, there will be held the exposition of the Woolen and Cotton Manufacturers' Association of the West and South. The merchants and manufacturers of St. Louis have contributed $10,000 to be awarded in premiums for cotton, which amount will be distributed as follows: For the best bale of long or short staple cotton raised in Tennessee, $500; for second-best bale, $250; for the third-best bale, $100. The same amounts will be paid, under the same conditions, for the best, second-best, and third-best cotton products of the States of Mississippi, Texas, Louisiana, Arkansas, Alabama, Georgia, South Carolina, North Carolina, and Missouri, respectively. A premium of $500 is also offered for the best bale of cotton raised from Peeler, Dickson, Silk, Lace, or any other improved seed; and $1,000 for the best bale of long or short staple cotton raised in any State. These large premiums will doubtless draw out many competitors and insure a fine display of the staple.

The Cincinnati Industrial Exposition of 1871 offer premiums amounting to $2,450 for the best bales of cotton from Texas, Louisiana, Arkansas, Tennessee, Mississippi, Alabama, and Georgia; the premiums being,

respectively, $250 for the best bale, and $100 for the second-best bale, from each State. In addition, a large gold medal is to be given for the best bale among the total receipts from these States. Cotton will be admitted for entry up to September 30.

NATIONAL AGRICULTURAL ASSOCIATION.—The Tennessee Agricultural and Mechanical Association has issued circular letters inviting all societies of like description throughout the United States to meet in congress at Nashville, Tennessee, October 3, 1871, for the purpose of forming a national agricultural association. The object of this movement is to secure, by concerted action, unity and harmony in the promotion of agriculture, and to increase the advantages offered by experience, skill, and science, in its development. Each society taking part in the congress will be entitled to one delegate for every fifty members, or fractional part of that number. Manufacturers of agricultural implements, throughout the United States, are invited to exhibit their articles at a national exposition during the State Fair.

ADDRESS OF DR. GEORGE B. LORING.—Dr. George B. Loring, in an address before the New England Agricultural Society, at Lowell, Massachusetts, September 8, urged upon mechanics and others engaged in daily labor in large cities and towns the propriety of securing rural homes within reach of their daily avocations, thus advancing the health and moral well-being of themselves and their families, and establishing a surer basis of material prosperity. The address also contains these suggestive remarks on the pecuniary condition of the agricultural population of Massachusetts:

> I think I may safely say that we have no industrious farmers who are poor, and very few farms, unless it be those which are in the hands of what are called fancy farmers, which are unprofitable. The homesteads of the agricultural community are in good condition; good houses, good barns, and well-tilled fields greeting you on every hand. Farms which were mortgaged ten years ago are now free from incumbrance; and even while the debts resting upon them have been paid, it would be difficult to estimate the amount of money which has been drawn from them in the shape of taxes for general and local purposes, and of contributions to all charitable purposes.

SOILING CROPS.—Mr. E. W Stewart gives the following as a good division of soiling crops when twenty cows are wholly soiled: *First*, two and a half acres of winter-rye, sown late in August or early in September, in the Middle and New England States; but may be somewhat later in the season in the South. Cut in the spring before the heads form, so that it will immediately commence a new growth. Under favorable conditions of soil and climate, rye may be cut in the way recommended every three weeks. *Second*, two and a half acres of orchard-grass and early clover, sown together, and cut just before coming into blossom. Three cuttings may be obtained on good ground in moist seasons. Sow twenty pounds of orchard-grass and twelve pounds of clover to the acre on land in fine tilth and well manured. *Third*, two and a half acres of timothy and large red clover, to be cut before coming into blossom. Ten pounds of timothy-seed and ten pounds of clover-seed to the acre will be sufficient. *Fourth*, two and a half acres of oats, sown early in April, at the rate of three or four bushels of seed to the acre, to be cut while in blossom. *Fifth*, four acres of corn, sown as follows: one acre each on the 20th of May, and on the 1st, 10th, and 20th of June. The rotation recommended will permit the feeding of a variety of food to stock at the same time, as clover with corn—a practice always desirable.

IRRIGATION IN CALIFORNIA.—For two years the wheat crop in California has suffered greatly from drought, and the journals of that State

are earnestly advocating the more extended construction of irrigating, canals as a safeguard for the future. The Stockton Independent claims than San Joaquin County would at this moment have been richer by one million of dollars had a canal been constructed last year to carry the waters of the Mokelumne upon the plains.

The canal which is being constructed from the San Joaquin River, near Firebaugh's Ferry, Fresno County, California, for the irrigation of the plains west of that river, will be about one hundred and ten miles in length. At the middle of August four hundred men and three hundred teams were pushing forward the work at the rate of two-thirds of a mile per day, and thirty-five miles of the canal had been completed. Its width at the bottom is thirty-two feet; at the top, forty-eight feet. The excavation is two feet in depth, but embankments are carried up on the sides to the height of four feet above the level of the plain, making the entire depth six feet. The canal is also designed for navigation.

Chinese labor in Louisiana.—Mr. J. Y. Gilmore, editor of the Louisiana Sugar-Bowl, gives a favorable account of the working of Chinese labor on seven plantations in the parishes of St. Mary, Terrebonne, Lafourche, and Assumption, in that State, the total number of Chinamen employed on these plantations being about two hundred and fifty. Two hundred of these were imported in one cargo, and previous to arrival had been, for the most part, unaccustomed to agricultural labor. These are scattered among five plantations, where they receive $13 per month and rations, lost time being charged against them, and three-thirteenths of their wages held in reserve till the expiration of their contract for three years, or an equivalent of nine hundred and thirty-six days of actual work. Their rations consist of one and three-quarters pounds of rice and one-half pound of pork daily, and they receive medical attendance and rations when sick. A majority of those planters and overseers with whom Mr. Gilmore conversed preferred Chinamen to negroes, the former being the more easily managed, and doing better work, though requiring more time for performance than the latter.

Fruit in Perry County, Pennsylvania.—A correspondent writes: most of our apple-orchards contain few of the best varieties—generally young trees. The most reliable for productiveness are the Baldwin, Tulpehocken, Wilderness, and Maiden's Blush, in the order named. Our peaches are chiefly from seedling trees. Hale's Early, Oldmixon, and Crawford's Late do well, considering that the peach crop is very uncertain here, except in a few favored localities. Pears are also uncertain, Louise Bonne de Jersey, Buffum, and Beurré d'Anjou being the most reliable among the varieties tried. Plums do quite well when the curculio is not unusually destructive. More than twenty varieties of American grapes have been tried by me. Concord, Creveling, Union Village, Ives, Martha, Hartford Prolific, and Clinton are reliable. I have never seen mildew on Ives, Creveling, or Union Village. Delaware and Rogers's 15 mildew frequently; Maxatawney more or less every year.

The California fruit-trade.—The growing importance of the overland trade in California fruit is shown by the following statements: From July 20 to August 1, of the present year, four houses in Sacramento forwarded to points on the overland railroad, beyond the State line, shipments of fruit averaging over eleven and one-half tons daily; pears, peaches, apples, plums, grapes, &c. Producers received, per pound, on an average, for pears 2½ cents; peaches, 2½ cents; apples, 1½

cents; plums, 3 cents; grapes, 3 cents. According to estimate, the length of the shipping season would be about ninety days, producers receiving for this period a total of $49,500 on shipments from Sacramento; and the total of shipments from Marysville, Lincoln, and Auburn would equal that from Sacramento. In addition to these amounts, other points in California make large shipments.

TRANS-CONTINENTAL TRADE.—During the present year the commerce of San Francisco with China and Japan has very largely increased. July 15th the steamship America, from China and Japan, brought 25,215 packages of tea, of which 16,357 packages were in transit for eastern cities, overland; besides 514 packages of silk for the East, by rail. In addition to this very large cargo of teas and silk, the steamer also brought 800 bales of hemp, 300 bags of coffee, oils, spices, and chow-chow, and of treasure $83,000. August 13th the steamer Japan brought 42,821 packages of teas; 1,025 of silk, and 1,663 of assorted merchandise. This is much the largest single importation of teas that ever entered an American port. Of this quantity no less than 29,735 packages were for New York, 2,092 for Boston, 263 for Philadelphia, 135 for Cincinnati, and 4,599 for Chicago, making a total of 36,824 packages for Atlantic and western markets. The Japan was thirty-three days in making the trip from Hong-Kong, and twenty-three days in coming from Yokohama. The San Francisco Commercial Herald, of August 18, states that 30,000 tons of teas, silks, &c., were awaiting shipment to America from Asiatic ports at the time of the sailing of the Japan, the greater part of which would probably come to that city. Our trade with Asia, by way of San Francisco and the Union Pacific Railway, has suddenly assumed very large and gratifying proportions.

SILK-CULTURE IN UTAH.—Reports of success with silk-worms in Utah are increasingly frequent. The worms have been healthy under proper treatment, and the yield of cocoons satisfactory in style and soundness. Samuel Carnaby, of Spanish Fork, states that upward of fifty families in his neighborhood have produced silk this season. He has silk from worms fed upon osage orange, and reports a successful experience of four years in the exclusive use of that plant.

SASSAFRAS-OIL.—In Richmond, Virginia, a firm of colored persons has for two years manufactured sassafras-oil on a large scale. The root is purchased at the factory at the rate of 30 cents per hundred pounds, and 40,000 pounds are used per week, producing 2 per cent., or 800 pounds of unrectified oil. Since this establishment commenced operations, other factories of like description have been started in Virginia. Sassafras-oil is used for scenting toilet soaps, flavoring tobacco, &c.

COTTON IN CALIFORNIA.—Recent accounts from California state that the cotton plantation on the Merced River bottoms is giving an excellent promise, and that southern experts who have visited the region pronounce its climatic conditions more favorable to the crop than those of the best portions of the South.

THE LOUISIANA ORANGE CROP.—The Louisiana Sugar-Bowl says that, notwithstanding the severity of the past winter, which greatly injured the orange-trees in some localities, where the branches were not killed by the freeze, they are, in every locality in Western Louisiana, well filled with fruit. The crop is a very sure one along the water-courses in Southern Louisiana. The lower Têche, Atchafalaya, Bœuf, Black, Du Large, Grand Caillou, Little Caillou, Lower Bayou Terrebonne, Le Bleu, and

Bayou Lafourche, are all well adapted to the growth of the tree, and generally have good facilities for shipping the fruit to market.

THE DESTRUCTION OF SHADE-TREES.—The wanton destruction of shade-trees is meeting with just condemnation in influential quarters in England. The Gardeners' Chronicle calls for the appointment in each town and city of a public officer, to be called the conservator of trees, whose duty it shall be to protect from ruthless destruction all ornamental and shade-trees on the line of public highways and side-walks. Officers with similar powers are needed in this country.

RICE-CULTURE IN CALIFORNIA.—The Sacramento Bee states that rice-culture has been successful in the swamp lands. In district No. 28, two persons planted a few acres in rice, last year, with results so encouraging as to induce them to greatly extend their enterprise this year. There is reason to believe that this branch of production may be greatly enlarged in these swamp lands.

TEA-SEED FROM JAPAN.—W. W. Hollister, of Santa Barbara, California, has received fifteen to twenty bushels of tea-seed, from Japan, to plant on his farm near Santa Barbara.

CHEAP COOKING APPARATUS.—E. C. Coombs, of Cherokee, Iowa, states that he uses, in cooking food for stock, a box, chiefly of 2-inch oak plank, made flaring, the length being 8 feet, the depth 2 feet, and the width 2 feet at bottom and 2½ feet at top. The bottom of the box is made of heavy sheet iron, lapping on the sides and ends. The box is set on a brick or stone flue, and is found especially valuable in cooking corn on the ear for hogs.

CATTLE-DISEASE IN DAKOTA TERRITORY.—A note has been received from the post-surgeon of Fort Randall, J. Frazee Boughter, M. D., giving the following statement concerning the disease among the cattle of that vicinity:

A disease has appeared among the cattle at this post; over fifty head have died in less than four months. The animals are generally sick only a few hours before dying. The disease I regard as a blood-poison, of some malignant nature; the spleen and liver are the organs principally affected. If you can give me some information, or refer me to some authorities, I shall be greatly obliged. I think the disease here is the so-called "splenic fever."

It may be the Texas cattle-fever, if we may judge from the reference to the organs mainly implicated. What are the other symptoms? Are Texas herds, recently arrived, kept in the neighborhood, or have any such herds been driven over the feeding-grounds of the native stock?

THE WESTERN CATTLE-BLINDNESS.—A singular disease of the eyes, resulting in blindness, is prevailing among cattle in Western Missouri. In the early stage of the disease the eyes commence swelling, at the same time running water. The swelling lasts from five to fourteen days, and when the discharge of water ceases, a firm white film covers the eyes, completely destroying sight. The disease is said not to impair the general health of the animal. The Kansas City Times, (Jackson County, Missouri,) states that this "epidemic" is spreading rapidly through that county, and along the line of the Memphis and Kansas City Railroad. In Independence from thirty to forty cattle, some of them very fine animals, are completely blind, and in Kansas City there are two hundred blind cows, some of the dairies having had fifteen blind milkers at one time.

THE STATISTICS OF LABOR.—In 1869 the State of Massachusetts instituted a bureau of statistics, whose office it is to collect, assort, systematize, and present, in annual reports to the legislature, statistical details relating to all departments of labor in the commonwealth, especially in its relations to the commercial, industrial, social, educational, and sanitary condition of the laboring classes, and to the permanent prosperity of the productive industry of the commonwealth. General Henry K. Oliver, the chief of this bureau, has presented two reports, in volumes covering more than a thousand octavo pages, and has given a full history of "labor reform" movements and their antecedents, "dependencies, and contingencies," not only in our own country but in England. Acting upon this example, the State of New Hampshire, through its legislature, has recently instructed its governor to appoint a committee of three persons to collect material and present a plan for the organization of a bureau of labor statistics, to be established at the next session of the legislature. The relations of capital to labor are everywhere but imperfectly understood, and any light that may be thrown upon them, especially with the view of harmonizing their interests, will be timely and valuable.

INLAND FISHERIES.—The attorney general for South Carolina, in an official opinion directed to the acting commissioner of agricultural statistics of that State, declares that the uniform legislation of the State since 1780, has been in favor of protecting the inland fisheries, by making unlawful all obstructions to the free passage of migratory fish from the ocean through the rivers to the creeks and smaller streams. All such obstructions are declared by law public nuisances, which the parties aggrieved may summarily abate.

The act of January 19, 1870, provides for a board of fish commissioners, to inspect all inland streams, and to report to the legislature any obstructions or impurities permitted to flow into them. It is, further, their duty to report violations of the fish laws to the solicitors of the various judicial circuits, in order that offenders may be prosecuted. At the late session of the legislature, the leading features of former laws were embodied in a new statute forbidding any obstruction, and designating as "close time" in each week from Saturday night to Monday morning, during which it is unlawful to take fish. Effective penalties are prescribed for violations of the act.

The commissioner of agricultural statistics, in a note to this Department, promises a vigorous effort, with the assistance of the law officers, to remove existing illegal obstructions, and to admit the passage of migratory fishes to the inland streams.

UNJUST DEALINGS WITH FARMERS.—An Illinois correspondent complains of the practices of buyers in his region, who, in their dealings with farmers, contrive to obtain 60 pounds of shelled corn to the bushel, or 72 pounds in the ear, dry, selling the same in the Chicago market at the legal rate of 56 pounds of shelled corn to the bushel, equivalent to 70 pounds of dry ear-corn. Rye is also bought from first hands at 60 pounds to the bushel, and put on the market at the legal rate of 56 pounds. He urges farmers to make common cause against these practices, and wherever they are persisted in, to club and ship their corn &c., directly to the large markets. A united protest and refusal to sell at unlegalized rates will remedy the injustice.

SALE OF BERKSHIRE HOGS.—A company of gentlemen residing in Scott County, Kentucky, known as the Scott County Importing Com-

pany, some time ago sent an agent to England, who purchased a number of the finest Berkshire hogs to be found in the best herds of that country. The sale of this stock took place on Thursday, July 13, at the farm of Mr. Barbee, near Georgetown, and attracted a large attendance. Eighteen animals were sold at an average of $171 each. One sow sold for $510, another for $335, and another for $300. The lowest figures for a sow were $65. The highest price for a boar was $160 and the lowest $80.

A NEW HEDGE-PLANT.—The Kangaroo hedge-plant is about to be tried in California. It is a native of Australia, where it is largely used for fencing purposes, is a rapid grower, and peculiarly adapted to dry soils. The success of Australian timber trees in California augurs well for the result of this new experiment.

BEE-KEEPING.—There is a growing interest in this specialty, and bee-keepers' associations have been organized in many States. Two national associations have been formed, one in December, 1870, and the other in February of the present year, both of which will meet at Cleveland, Ohio, in December, 1871.

THE CLIMATE OF ASTORIA, OREGON.—Mr. Lewis Wilson, of Astoria, Oregon, has compiled the following table of the monthly mean temperature of that place since 1865, three observations having been made daily:

	1866.	1867.	1868.	1869.	1870.
January	37.3	41.7	29.4	41.7	41.2
February	37.1	39.4	39.2	41.6	42.3
March	44.1	37.2	42.7	47.7	41.0
April	46.5	46.5	48.6	50.4	48.5
May	51.0	52.6	52.2	55.1	52.2
June	55.0	56.3	56.1	59.8	57.4
July	59.5	60.6	59.9	60.1	.....
August	59.2	60.4	59.5	58.5	.....
September	57.7	57.4	54.5	57.0	.....
October	52.7	50.6	52.2	52.2	.....
November	48.2	47.3	45.6	47.8	.....
December	44.1	42.6	44.1	42.2	.....
Annual mean	49.4	49.3	48.6	51.2	.....

DROUGHT IN GEORGIA.—A correspondent at Cartersville, Georgia, states that drought is much more prevalent in North Georgia now than formerly, owing probably to destruction of forests on the line of march of the two armies during the war. Wheat, with the seed ordinarily used, has ceased to be remunerative.

AN ENGLISH PRIZE FARM.—The prize offered by the Royal Agricultural Society, of England, for the best farm of the year, has been adjudged to Mr. Forrester, Sherlowe, High Ercall, near Wellington. His farm has been cultivated by him for more than twenty years, on the principle of a four-course rotation—wheat, barley, turnips, and clover. It comprises 400 acres, of which less than 300 acres are arable, the soil being characterized as good, but not of the best quality. Nine horses are employed and do all the work easily. Twenty tons of manufactured turnip-manures and two tons of nitrate of soda are used annually, besides large quantities of farm-yard manure from cake-fed animals. The annual meat product of the herds and flocks of the farm

is, approximately, 28 Herefords, between the ages of two and a half years and three years, selling for £30 each, amounting to £840, and 200 fat shearlings, fifteen months old, selling for £2 10*s.* each, amounting to £500; making the value of the annual meat product £1,340, exclusive of hogs fed, but not bred, on the farm. There are 72 acres in wheat, giving an average of 34 bushels per acre, or a total of 2,448 bushels; and an equal area in barley gives an average of 47 bushels per acre, or a total of 3,384 bushels.

PROTECTION OF ANIMALS IN BELGIUM.—The "Societé Royale Protectrice des Animaux" held its annual session on Sunday, May 21, 1871, M. Aug. Visscher, the president, in the chair. The report of the secretary, upon the labors of the society during 1870, was read. Among the interesting points presented was the project of a confederative union of the animal-protective societies of Belgium, an idea which, however, had been found very difficult to realize. The tendency to organize independent associations in different provinces is strongly deprecated. The society has been very active in the work of publication. In addition to its Monthly Official Bulletin, it purchased a newspaper—L'Album Populaire—of considerable circulation, reduced its price 50 per cent., and gave it a new character of devotion to the humane mission of benevolence to animals. It also published several works bearing upon the subject. For all its publications it has found an increasing demand, showing that the cause it represents is winning its way to the popular heart. During the year 1870 not less than eighty medals were distributed, mostly among hackney coachmen, for services in bringing to justice cases of cruelty to horses, perpetrated by men of their own calling. In the prosecution of cases of this character, the society has manifested an energy and determination which have gone far toward the repression of cruelty. During the last year, in Brussels alone, seventy-five offenses were prosecuted to conviction; of these, fifteen were for the maltreatment of horses, nine for maltreatment of dogs, and one for cruelty to a cat. In thirteen cases, in addition to the payment of damages done to the animals, imprisonment varying from one to five days was added. The omnibus companies, in reply to the letters addressed them by the president of the society, promise strict compliance with the law fixing the number of passengers that may be transported in each vehicle. An American street-railroad had been built, the director of which sympathizes with the objects of the society and asked admission to membership.

GROWING MADDER IN ENGLAND.—Experiments made by Mr. Sidebotham, in England, in the cultivation of madder for dyeing purposes, have proved substantially a failure. The roots were nearly equal in size to fine French roots, but showed in fracture an orange or yellow, instead of a deep red color. On application to fabrics the dyes derived from the madder appeared at first full in color, but, on being cleared with soap, proved quite the contrary, resembling Dutch madder, the purple element almost entirely wanting, and the reds and pinks weak and loose. M. Sidebotham inclines to the opinion that good madder cannot be grown in England.

THE FOOT AND MOUTH DISEASE.—This disease is spreading in Glasgow, Scotland. The last week in August the inspector seized upward of one hundred head. In Lancashire, England, reports are made daily of fresh outbreaks. The disease is extremely prevalent in West Derby Hundred, and in the north of Amounderness Hundred. In Fulwood and

Broughton, in the neighborhood of Preston, thirty-five farms are declared infected; and in Leyland Hundred ninety farms have been reported. The inspector reports that the disease has made its appearance on twenty farms in Halsted, Febmarsh, Lamarsh, &c., nearly two hundred cattle and pigs being affected.

HEALTHFULNESS OF SEWAGE-FERTILIZED PRODUCTS.—On the 26th of July several members of the Essex Chamber of Agriculture paid a visit of inspection to the farm of Mr. W. V. Hope, which is irrigated with the Romford sewage, and subsequently held a meeting in the town of Romford, to discuss the subject of legislation affecting the utilization of sewage. In the course of an address before the meeting, Mr. Hope stated that one of the objections to the utilization of sewage by irrigation, advanced by Dr. Cobbold, that it would produce parasites in cattle fed upon the land thus irrigated, and that the eggs of those parasites would be taken into the stomachs of the people, had been refuted by an experiment he had recently made. He had fed an ox for twenty-two months on sewage-produce—grass, mangel-wurzel, cabbage-leaves, and very often the rakings of the grass. The animal was slaughtered on the 15th of July, in the presence of Dr. Cobbold and other scientific gentlemen, and after it had been minutely dissected and examined, these gentlemen failed to detect any trace of disease whatever, and Dr. Cobbold was entirely converted to sewage irrigation. The meeting adopted a resolution declaring, "That, in view of the large amount of foreign wheat paid for every year by the population of England, and the large amount of manure wasted in polluting rivers with town sewage, it is desirable that such pollution should now be prohibited by legislative enactment."

A STEAM-DITCHER.—A steam ditching-machine recently exhibited at Wolverhampton, England, is stated to be capable of digging a ditch two feet deep, at the rate of about one mile an hour. The following is a general statement of its construction: A strong frame is supported on four wheels, the front and smaller pair being provided with steerage gear, and the two hind wheels mounted on a cranked axle, having a segment by which it can be turned. A wire rope leads from the hauling-engine around a sheave at the front of the ditcher and back to the hind wheel of the engine, thus securing a double purchase. Beneath the main frame of the ditcher is attached, by three strong colters, a large scoop, resembling in form a right-hand and a left-hand plow joined back to back. In digging, the two outside colters and the share cut the sides and bottom of the ditch, and the mass of earth, split by the central colter, is brought to the surface and thrown at some distance from the margins of the cutting. The lifting of the scoop is thus brought about: The sheave over which the hauling-rope passes, at the front of the ditcher, communicates by clutch with a small winding-drum operating a chain which passes over the segment on the hind axle, and the winding up of the chain turns the hind axle and wheels, and throws the scoop upward.

LIST OF FAIRS FOR 1871.

American Pomological Society, at Richmond, Virginia	Sept. 6—8.
Cotton States, Augusta, Georgia	Oct. 31 to Nov. 7.
New England, Lowell, Massachusetts	Sept. 5—8.
American Institute, New York City	Sept. 7 to Nov. 2.

STATE FAIRS.

Alabama, Montgomery	Oct. 16—20.
Arkansas, Little Rock	Oct. 3— 6.
California, Sacramento	Sept. 18—23.
Colorado Territory, Denver	Sept. 12—16.
Georgia, Macon	Oct. 23.
Illinois, Du Quoin	Sept. 25—30.
Indiana, Indianapolis	Oct. 2— 7.
Iowa, Cedar Rapids	Sept. 11—15.
Kansas, Topeka	Sept. 11—15.
Louisiana, New Orleans	Nov. 18.
Maryland, Baltimore	Oct. 3— 6.
Michigan, Kalamazoo	Sept. 19—22.
Michigan, (Pomological,) Grand Rapids	Sept. 12—15.
Mississippi, Jackson	Oct. 23—28.
Minnesota, St. Paul	Sept. 26—29.
Nebraska, Brownville	Sept. 26—29.
New Jersey, Waverly Station	Sept. 19—23.
New York, Albany	Oct. 2— 6.
New Hampshire, Dover	Sept. 26—29.
Ohio, Springfield	Sept. 25—29.
Oregon, Salem	Oct. 9—15.
Pennsylvania, (Horticultural,) Philadelphia	Sept. 12.
Pennsylvania, Scranton	Sept. 19—22.
South Carolina, Columbia	Nov. 6—11.
Tennessee, Nashville	Sept. 26—30.
Vermont, St. Johnsburg	Sept. 12—15.
Virginia, Richmond	Oct. 31 to Nov. 3.
Virginia (Pomological,) Richmond	Sept. 6— 8.
Virginia, (Trial of Plows,) White Sulphur Springs	Aug. 15.
Wisconsin, Milwaukee	Sept. 25—29.

DISTRICT FAIRS.

Agricultural and Horticultural, Aurora, Illinois	Sept. 25—29.
Agricultural and Industrial, Atlanta, Georgia	Oct. 6—21.
Agricultural College, Ames, Iowa	Sept. 26—28.
Agricultural, Horticultural, and Mechanical, Indianapolis, Indiana	Sept. 25—30.
Belle Plain Union, Belle Plain, Iowa	Sept. 19—22.
Blue Grass and Kansas Valley, Manhattan, Kansas	Sept. 26—28.
Bridgeton District, Bridgeton, Indiana	Aug. 28 to Sept. 2.
Cedar Valley, Cedar Falls, Iowa	Sept. 19—21.
Central Fair, Hubbardstown, Iowa	Oct. 3— 5.
Central Illinois, Jacksonville, Illinois	Sept. 19—22.
Central Iowa, Des Moines, Iowa	Sept. 19—21.
Central Kentucky, Danville, Kentucky	Sept. 19—20.
Central Michigan, Lansing, Michigan	Oct. 3— 5.
Central New Jersey, Trenton, New Jersey	Sept. 19—21.
Central Ohio, Mechanicsburg, Ohio	Sept. 19—22.
Central Pennsylvania, Altoona, Pennsylvania	Sept. 12—16.
Cherokee and Alabama, Rome, Georgia	Oct. 10—13.
Cincinnati Industrial, Cincinnati, Ohio	Sept. 6 to Oct. 7.
District Fair, Cambridge, Indiana	Sept. 25—29.
District Fair, Middleton, Indiana	Sept. 12—16.

District Fair, Ripon, Wisconsin	Sept. 19—21.
District Fair, Russellville, Indiana	Sept. 4— 9.
District Fair, Waupun, Wisconsin	Sept. 14—16.
District Fair, Elgin, Illinois	Sept. 12—25.
East Pennsylvania, Norristown, Pennsylvania	Sept. 27—30.
Fall Creek District, Pendleton, Indiana	Sept. 26—29.
Farmers and Mechanics' Institute, Danville, Illinois	Sept. 19—21.
Honey Creek District, New London, Indiana	Sept. 25.
Horse Fair, Dixon, Illinois	Sept. 13—16.
Horse Fair, Kalamazoo, Michigan	Aug. 15—18.
Industrial, Savannah, Georgia	Nov. 21—25.
Industrial, Richmond, Indiana	Sept. 12—15.
Memphis Agricultural and Mechanical, Memphis, Tennessee	Oct. 16—21.
Mooresville District, Mooresville, Indiana	Sept. 4— 8.
Minneopolis Association, Minneopolis, Minnesota	Sept. 12—16.
Nishua Valley, Cass County	Oct. 12—13.
Northern Kansas, Atchison, Kansas	Oct. 3— 6.
New York and Pleasant Valley Grape Growers', Hammondsport, New York	Sept. 26—28.
Northern Kentucky, Florence, Kentucky	Sept. 19.
Northern Michigan, Grand Rapids, Michigan	Sept. 12—15.
Northern Missouri, Hannibal, Missouri	Sept. 25—30.
Northern Ohio, Cleveland, Ohio	Sept. 12—17.
Northern Wisconsin, Oshkosh, Wisconsin	Oct. 2— 6.
Northeastern Iowa, Postville, Iowa	Oct. 4— 6.
Northwestern Iowa, Clermont, Iowa	Oct. 4— 6.
Northwestern Horticultural, St. Joseph, Missouri	Oct. 5— 7.
Pekin District, Pekin, Illinois	Sept. 18—22.
Poweshick Central, Malcom, Iowa	Sept. 26—28.
Sabine Valley, Louisiana	Oct. 3.
San Francisco Mechanics' Institute, San Francisco, California	Aug. 8 to Sept. 5.
San Francisco Bay Horticultural, San Francisco, California	Aug. 8 to Sept. 5.
San Joaquin Valley, Stockton, California	Sept. 12—15.
Santa Clara Valley,	Aug. 28 to Sept. 1.
Shenandoah Valley, Winchester, Virginia	Oct. 18—20.
Sonoma and Maria District, Petaluma, California	Sept. 25 to Oct. 1.
Southern Kansas and Missouri, Fort Scott, Kansas	Sept. 25.
South Kentucky, Glasgow, Kentucky	Oct. 3— 6.
South Georgia, Thomasville, Georgia	Oct. 3 to Nov. 4.
Southern Wisconsin, Jonesville, Wisconsin	Sept. 12—15.
Southeast Missouri, Cape Girardeau, Missouri	Oct. 12—14.
Southwest Wisconsin, Mineral Point, Wisconsin	Sept. 5— 9.
Southwest Iowa, Red Oak, Iowa	Oct. 3— 6.
Southwestern Virginia, Wytheville, Virginia	Oct. 11—13.
St. Louis Agricultural and Mechanical, St. Louis, Missouri	Oct. 2— 7.
Stock Fair, Salvisa, Kentucky	Sept. 15.
Swine Exposition, Chicago, Illinois	Sept. 19—21.
Tennessee Central, Murfreesborough, Tennessee	Sept. 26 to Oct. 1.
Thorntown Union, Thorntown, Indiana	Sept. 25—29.
Union Central, Atlanta, Illinois	Aug. 29 to Sept. 2.
Union Fair, Centralia, Illinois	Sept. 18—22.
Union Fair, Covington, Indiana	Sept. 26—29.

Union Fair, Kingston, Indiana	Aug. 29 to Sept. 1.
Union Fair, Liberty, Indiana	Aug. 29 to Sept. 1.
Union Fair, Mechanicsville, Iowa	Sept. 19—22.
Union Fair, Sandwich, Illinois	Sept. 5— 8.
Union Fair, Warren, Illinois	Sept. 12—15.
Union Fair, Wilton, Iowa	Aug. 23—25.
Upper Sacramento Valley, Chico, California	Sept. 26.
West Alabama, Eutaw, Alabama	Oct. 17—21.
Western New York, Rochester, New York	Sept. 26—29.
Western Texas, San Pedro Springs, Texas	Sept. 27—30.
West Virginia Central, Clarksburgh, West Virginia	Sept. 19—21.

MARKET PRICES FOR FARM PRODUCTS.

Articles.	August.	September.
NEW YORK.		
Flour, State ..... per barrel	$4 65 to $6 50	$4 95 to $6 40
western ..... do	4 65 to 9 00	4 95 to 9 00
Wheat, No. 1 spring ..... per bushel	1 28 to 1 40	.....
No. 2 spring ..... do	1 35 to 1 37	1 32 to 1 36
winter, amber, western ..... do	1 38 to 1 46	1 37 to 1 46
Corn, new western, mixed ..... do	.....	.....
old western, mixed ..... do	65 to 67½	65 to 68
Rye	Nominal.	Nominal.
Barley	Nominal.	80 to ———
Oats, western, mixed ..... per bushel	62 to 63	40 to 48
State ..... do	.....	.....
Hay, shipping qualities ..... per ton	22 50 to ———	20 00 to ———
prime ..... do	26 00 to 32 00	23 00 to 27 00
Pork, mess ..... per barrel	13 62 to 14 00	13 50 to 13 55
prime mess ..... do	12 00 to 12 75	10 25 to 11 00
Beef, mess ..... do	8 00 to 12 00	7 00 to 11 00
extra ..... do	13 00 to 15 00	11 00 to 14 00
Lard, extra ..... per pound	10 to 10⅝	9½ to 9¾
Butter, western ..... do	11 to 20	12 to 20
State ..... do	15 to 30	15 to 31
Cheese, dairy ..... do	5 to 10	5 to 10
factory ..... do	8 to 11	8 to 10¾
Cotton, ordinary ..... do	15⅛ to 17½	15¾ to 17⅝
middling ..... do	18½ to 21⅝	18⅜ to 21¾
Tobacco, sound lugs, light grades ..... do	6¾ to 7¾	6¾ to 7¾
sound lugs, heavy grades ..... do	7½ to 8	7½ to 8
common leaf, light grades ..... do	8 to 8½	8 to 8½
common leaf, heavy grades ..... do	8¼ to 9¼	8½ to 9¼
Wool, combing fleece ..... do	.....	.....
extra, pulled ..... do	45 to 60	62 to 62½
Texas, common to medium ..... do	.....	46 to ———
California, common ..... do	38 to 42½	31 to 45½
BOSTON.		
Flour, western, superfine ..... per barrel	5 00 to ———	4 75 to 5 50
extra ..... do	5 50 to 7 00	5 50 to 6 50
choice ..... do	7 00 to 9 00	7 00 to 9 00
Corn, yellow ..... per bushel	77 to 78	77 to 79
mixed ..... do	74 to 76	75 to 77
Oats ..... do	60 to 66	47 to 55
Rye ..... do	95 to 1 00	75 to 80
Barley ..... do	90 to 1 10	Nominal.

Market prices for farm products—Continued.

Articles.	August.	September.
BOSTON—Continued.		
Pork, mess ..... per barrel..	$16 00 to $16 50	$14 00 to $15 00
prime ..... do.....	13 00 to 14 00	12 00 to 12 50
Beef, mess ..... do.....	12 00 to 14 00	12 00 to 14 00
extra mess ..... do.....	15 00 to 17 00	15 00 to 17 00
Lard ..... per pound..	10½ to 11½	9½ to 11½
Butter, New York and Vermont..... do.....	15 to 28	12 to 28
Canada..... do.....	18 to 26	18 to 27
western ..... do.....	12 to 23	15 to 24
Cheese, eastern factory ..... do.....	5 to 10½	5 to 11
Hay, prime..... per ton...	30 00 to 33 00	30 00 to 37 00
Wool, western ..... per pound..	59 to 65	60 to 63½
combing, and delaine fleeces.... do.....	46 to 67	65½ to 75
tub ..... do.....	72 to 1 07½	70½ to 90
pulled ..... do.....	40 to 62½	52½ to 65
CHICAGO.		
Flour, winter, extras ..... per barrel..	5 90 to 6 25	6 00 to 6 87½
spring, extras ..... do.....	5 25 to 6 00	4 50 to 6 25
Wheat, No. 1 spring..... per bushel..	1 05 to 1 06	1 07 to 1 07½
No. 2 spring ..... do.....	1 01 to 1 03½	1 06½ to ———
No. 3 spring ..... do.....	95 to ———	1 00 to 1 02
Corn, No. 2 ..... do.....	43 to 45½	54 to 54½
rejected ..... do.....	41 to 42	52 to 52½
no grade..... do.....	———	———
Oats, No. 2 ..... do.....	28¾ to 29	48¾ to 49½
rejected ..... do.....	25 to 25½	46 to 47½
Hay, timothy and clover, (in trade)..per ton..	13 00 to 14 00	14 00 to 15 00
prairie ..... do.....	9 00 to 11 00	8 00 to 11 00
Pork, mess ..... per barrel..	13 25 to 13 75	14 50 to ———
prime mess ..... do.....	———	12 00 to 13 50
Beef, mess ..... do.....	12 00 to 12 50	11 00 to 13 00
extra mess ..... do.....	14 00 to 14 50	14 00 to 15 00
Lard ..... per pound..	9⅓ to 9⅝	10½ to ———
Butter, firkin and tub..... do.....	9 to 18	7½ to 19
extra ..... do.....	19 to 20	17 to 20
Cheese, New York factory..... do.....	10 to 11	10 to 11
western factory ..... do.....	8 to 9	9 to 10
western reserve ..... do.....	———	———
Wool, medium fleece ..... do.....	50 to 59	45 to 55
unwashed, medium ..... do.....	37 to 42	33 to 42
tub ..... do.....	———	55 to 64
CINCINNATI.		
Flour, family ..... per barrel..	5 50 to 5 65	5 50 to 5 75
extra ..... do.....	5 25 to 5 40	5 25 to 5 50
superfine..... do.....	4 75 to 4 90	4 25 to 4 75
low grades ..... do.....	4 00 to 4 50	4 00 to 4 50
Wheat, No. 1 white..... per bushel..	1 25 to ———	1 25 to ———
No. 2 white..... do.....	1 22 to ———	1 22 to ———
No. 1 red ..... do.....	1 12 to 1 13	1 19 to ———
No. 2 red ..... do.....	1 10 to ———	1 17 to ———
Corn, No. 1 ear..... do.....	51 to 52	54 to ———
new ear..... do.....	———	52 to ———
Rye, No. 1 ..... do.....	65 to ———	68 to ———
No. 2 ..... do.....	63 to ———	65 to ———
rejected..... do.....	———	———
Barley, No. 1..... do.....	———	———
No. 1 State..... do.....	65 to 70	70 to ———
Oats, No. 1 mixed..... do.....	35 to 37	34 to 35

Market prices for farm products—Continued.

Articles.	August.	September.
CINCINNATI—Continued.		
Oats, No. 2 mixed ..... per bushel..	$0 33 to $0 35	$0 30 to $0 33
Hay, tight-pressed ..... per ton...	16 00 to 18 00	15 00 to 18 00
loose ..... do.....	18 00 to 27 00	16 00 to 22 00
Pork, mess ..... per barrel..	12 50 to 13 00	12 25 to 12 75
prime mess ..... do.....	———	———
Lard, prime steam ..... per pound..	9¼ to ———	8¼ to ———
Butter, choice Ohio ..... do.....	17 to 22	18 to 22
fair to good ..... do.....	12 to 15	12 to 14
Cheese, western reserve ..... do	———	———
factory ..... do.....	9½ to ———	9 to 9½
Cotton, ordinary ..... do.....	13¼ to 17½	13¼ to 16½
middling ..... do.....	18 to 20¼	17 to 19
Tobacco, lugs, West Virginia ..... do.....	4½ to 8½	4½ to 7½
lugs, Kentucky ..... do.....	8¼ to 12	8¼ to 12
common to medium leaf, West Virginia ..... do.....	7½ to 10	7 to 10
common to medium leaf, Ky.. do.....	12 to 18	12 to 18
Wool, tub-washed ..... do.....	65 to 67	65 to 67
fleece-washed ..... do.....	50 to 55	50 to 55
unwashed ..... do.....	40 to 45	40 to 42
pulled ..... do.....	50 to 52	50 to 52
ST. LOUIS.		
Flour, superfine ..... per barrel..	4 00 to 4 50	3 75 to 4 20
extras ..... do.....	5 00 to 6 00	4 75 to 6 00
Wheat, spring ..... per bushel..	———	———
winter No. 1 ..... do.....	1 22½ to 1 40	1 30 to 1 40
winter No. 2 ..... do.....	1 18 to 1 20	1 20 to 1 26
winter No. 3 ..... do.....	1 10 to 1 15	1 10 to 1 15
red ..... do.....	1 07 to 1 28	1 07 to 1 33
Corn, mixed ..... do.....	41 to 44	43 to 50
yellow ..... do.....	42½ to 43	———
Rye ..... do.....	40 to 58	58 to ———
Barley, winter ..... do.....	55 to 90	65 to 75
spring ..... do.....	45 to 68	70 to 85
Oats, mixed ..... do.....	31½ to 38	33 to 41
yellow ..... do.....	———	———
Hay ..... per ton..	18 00 to 20 50	16 00 to 24 00
Pork, mess ..... per barrel..	14 25 to 14 50	13 00 to ———
Lard, tierce ..... per pound..	10½ to ———	9½ to 9¾
keg ..... do.....	11¼ to ———	11 to ———
Butter, choice ..... do.....	18 to 20	18 to 21
fair to medium ..... do.....	14 to 15	14 to 16
Cheese, factory ..... do.....	10½ to 12	9¼ to 10
Cotton, middling ..... do.....	19 to 19½	18 to 18½
Tobacco, sound leaf ..... per cwt..	5 50 to 7 50	6 50 to 7 75
common leaf ..... do.....	7 25 to 8 00	7 00 to 8 00
medium ..... do.....	8 00 to 9 00	8 50 to ———
Wool, tub-washed ..... per pound..	59½ to 67½	60 to 68½
fleece-washed ..... do.....	50 to 60	48 to 56
combing ..... do.....	40 to 44	42 to 43½
pulled ..... do.....	———	———
NEW ORLEANS.		
Flour, superfine ..... per barrel..	5 25 to ———	4 50 to ———
extras, (according to grade) .... do.....	6 25 to 9 25	5 25 to 8 00
Corn, mixed ..... per bushel..	72½ to 73	67 to 68
yellow ..... do.....	74 to ———	70 to ———
white ..... do.....	77 to 78	70 to ———

Market prices for farm products—Continued.

Articles.	August.	September.
NEW ORLEANS—Continued.		
Oats, prime ..... per bushel..	$0 64 to $0 66	$0 49 to $0 50
Hay, choice ..... per ton..	32 00 to ———	32 00 to 35 00
prime ..... do.....	30 00 to ———	.....
Pork, mess ..... per barrel..	14 50 to 15 75	14 00 to 14 50
Lard, tierce ..... per pound..	10⅜ to 11	10¼ to 10½
keg ..... do.....	11½ to 11⅝	11¼ to 11½
Butter, choice western ..... do.....	20 to 23	21 to 22
choice northern ..... do.....	32 to 34	30 to 34
common ..... do	.....	.....
Cheese, choice factory ..... do.....	12 to 13	10 to 12½
western reserve ..... do.....	11 to ———	.....
Cotton, ordinary ..... do.....	13 to 17	16¼ to 17
low middling ..... do.....	18 to 18½	17¼ to 17⅜
middling ..... do.....	20 to 20½	18¼ to 18⅜
Tobacco, lugs ..... do.....	6 to 7	6¼ to 8⅜
low leaf ..... do.....	7 to 7½	.....
medium leaf ..... do.....	7½ to 8	8 to ———
SAN FRANCISCO.		
Flour, superfine ..... per barrel..	5 75 to 6 25	6 25 to 6 50
extras ..... do.....	6 25 to 6 50	6 75 to ———
Wheat, State ..... per cental..	2 20 to 2 25	2 42½ to 2 47½
Oregon ..... do.....	2 20 to 2 25	.....
Corn, white ..... do.....	2 15 to 2 20	2 40 to ———
yellow ..... do.....	2 15 to 2 20	2 40 to ———
Hay, State ..... per ton..	17 00 to 20 00	17 00 to 22 00
Pork, mess ..... per barrel..	25 00 to ———	22 00 to ———
prime ..... do.....	22 00 to ———	20 00 to ———
Beef, mess ..... do.....	14 00 to ———	17 50 to ———
Lard ..... per pound..	12½ to 14½	.....
Butter, State ..... do.....	.....	30 to 38
Oregon ..... do.....	.....	.....
overland ..... do.....	20 to 30	17 to 25
Cheese ..... do.....	14 to ———	9 to 14
Wool, choice ..... do.....	40 to 42⅔	28 to 37
inferior to medium ..... do.....	27½ to 35	Neglected.

METEOROLOGY.

JULY AND AUGUST, 1871.

COMPILED IN THE DEPARTMENT OF AGRICULTURE FROM REPORTS MADE BY THE OBSERVERS OF THE SMITHSONIAN INSTITUTION.]

Table showing the highest and lowest range of the thermometer, (with dates prefixed,) the mean temperature, and amount of rain-fall, (in inches and tenths,) for July and August, 1871, as reported by the observers at the stations named. Observations daily at 7 a. m., and 2 and 9 p. m.

Stations in States and Territories.	JULY.						AUGUST.					
	Date.	Maximum temperature.	Date.	Minimum temperature.	Mean temperature.	Rain-fall.	Date.	Maximum temperature.	Date.	Minimum temperature.	Mean temperature.	Rain-fall.
MAINE.		*Deg.*		*Deg.*	*Deg.*	*In.*		*Deg.*		*Deg.*	*Deg.*	*In.*
Houlton												
Orono	13, 15	82	17	54	67.1	2.13	3	83	22	45	65.9	3.85
Surry	15	89	1	57	70.5	.....	3, 17	85	23	52	69.0	.....
Williamsburgh							3	83	21	50	66.5	4.00
West Waterville	13	88	26	59	70.5	4.21	4, 5	84	13	56	70.7	4.98
Gardiner	2	90	24	58	69.3	4.58	4	82	23	53	67.5	4.93
Lisbon	7, 15	88	22	54	68.4	3.90	5	88	22	50	67.7	6.22
Standish	6, 9, 13	90	1, 2, 12, 20, 22	58	70.5	4.61	4	89	17	53	70.2	4.74
Norway	13	89	22	55	69.7	5.25	4	89	21	55	68.7	5.50
Cornish	13, 15	86	23	53	68.2	4.95	4	86	20	50	67.6	6.62
Cornishville	6, 9, 13	87	17, 26	58	71.5	5.80	4	90	21	55	.....	.....
NEW HAMPSHIRE.												
Stratford							4	90	20	43	63.7	5.15
Whitefield	6, 13	87	1	50	66.3	3.87	15	87	20	44	64.3	5.89
Tamworth	6	89	17, 20	51	69.2	7.08	4	89	20	50	68.3	3.61
Contoocook ville	9	91	22, 24	55	71.8	3.80	4, 5	88	20	52	69.5	4.50
Amoskeag	9	93	18	42	67.5	2.50	4	93	18	38	67.8	5.77
VERMONT.												
Lunenburgh	6, 13	88	18	50	68.2	4.33	16	90	18	50	66.9	7.07
Craftsbury	14	89	20, 22	47	64.3	7.00	4	88	13, 19, 31	47	62.5	6.54
South Troy	13	90	22	53	69.2	7.44	15	88	20	50	66.6	9.72
East Bethel	6, 13	93	21, 22	51	65.1	3.13	15	90	20	42	66.9	5.40
Woodstock	13	85	1, 22	50	66.0	4.67	4	84	20	45	64.0	3.93
Norwich	6	89	23	52	71.1	3.30	15	90	18, 20	50	69.5	4.00
Near St. Albans	2	93	21, 23	55	67.8	6.90	16	87	19	51	66.4	6.50
West Charlotte	13	94	22	56	71.5	9.06	4	90	20	55	71.6	6.31
Panton	13	90	22	55	70.8	8.29	15, 24	88	19, 20, 21	56	68.8	6.39
Castleton	13	87	22	54	70.7	5.95	4, 15	85	20	49	68.9	5.00
MASSACHUSETTS.												
Kingston	13	92	23	57	72.2	2.25	4	92	20	56	71.9	5.49
Lawrence	9, 13	89	22	55	70.8	3.35	4, 12, 24, 27	85	21	52	70.7	5.39
Georgetown	9	89	22	55	69.8	2.65	4, 12	87	20	54	70.2	5.27
Milton	6, 9	93	24	56	72.3	2.68	4, 12	90	23	52	72.6	2.67
North Billerica	13	90	22, 24	56	71.3	.....	12	87	19	50	71.5	.....
New Bedford	12	83	25	57	69.1	1.75	6	81	19	57	70.0	6.49
Worcester	9, 13, 15	83	22	55	.....	.....	12, 17	83	20	54	69.7	3.94
Lunenburgh	13	87	23	54	69.8	3.65	7, 12, 27	84	20	51	69.8	5.75
Mendon							7, 12	84	20	54	69.6	4.60
Amherst	13	86	1	54	69.2	3.52	7	85	20	50	69.2	6.45

Table showing the range of the thermometer, &c., for July and August—Continued.

Stations in States and Territories.	JULY.						AUGUST.					
	Date.	Maximum temperature.	Date.	Minimum temperature.	Mean temperature.	Rain-fall.	Date.	Maximum temperature.	Date.	Minimum temperature.	Mean temperature.	Rain-fall.
MASS.—Contin'd.		*Deg.*		*Deg.*	*Deg.*	*In.*		*Deg.*		*Deg.*	*Deg.*	*In.*
Richmond	3, 18	90	1	54	72. 7	6. 45	7, 16	91	20	50	70. 8	12. 81
Williams College.	13	87	23, 24	52	72. 8	4. 73	16	87	20	52	68. 7	6. 53
Hinsdale	13	85	22, 23	52	66. 3	5. 90	7	84	18, 19, 20	52	66. 9	5. 90
RHODE ISLAND.												
Newport	12	91	23	59	72. 9	1. 94	7, 11, 12	88	23	60	74. 0	7. 68
CONNECTICUT.												
Columbia	15	94	22, 23, 24, 25	58	72. 0	3. 44	12	94	23	53	72. 2	8. 31
Middletown	12	88	23	53	70. 0	5. 48	7	90	20	52	72. 2	8. 31
Southington	13	84	22	57	69. 7	2. 46	7	85	20	58	71. 6	8. 72
Round Hill	6, 11	86	25	58	71. 1	4. 24						
Colebrook									20	51	67. 3	10. 28
NEW YORK.												
Moriches	11	93	22	62	73. 7	5. 36	10	87	20	58	74. 8	3. 18
Warrensburgh	6, 9, 13, 14	90	1	55	71. 8	8. 15	9	96	21, 26	55	73. 6	3. 47
South Hartford	14, 15	90	17	56	72. 8	5. 45	4, 7, 16	87	20	53	73. 1	9. 10
North Argyle	9	88	22	56	70. 8	5. 22	3, 4	85	20	56	72. 9	5. 70
Troy	6	91	22	58	73. 1	7. 24						
Garrison's	12, 13	86	23, 25	58	70. 0	4. 63	16	86	19	55	72. 6	6. 12
Throg's Neck	13	90	25	60	72. 9		5	88	20	61	74. 5	
White Plains	12	84	25	59	71. 2		5, 7	83	19	57	69. 2	
Cooper Union	15	87	25	61	73. 3	6. 27	27	86	31	65	75. 2	6. 41
Brooklyn	15	90	25	61	72. 9	5. 53	16	88	20	60	74. 3	9. 91
Flatbush	5, 15, 16	89	25	61	75. 7	5. 05	9	90	24	62	75. 9	9. 74
Glasco	9	93	23	52	72. 2	3. 11	16	90	6	48	72. 1	7. 35
Middleburgh	9, 12, 13	90	25	58	75. 8	8. 40	8	92	20	52	73. 7	4. 50
Cooperstown	13	87	24	50	67. 7	4. 64	16	89	20	46	69. 2	4. 50
Gouverneur	13	86	22	51	65. 3	3. 33	16	86	19	48	66. 1	2. 84
Canton	13	90	17	54	67. 6		16	88	20	49	67. 9	
North Hammond	6, 13	90	19	58	69. 0	4. 23	14	96	19, 28	58	74. 3	3. 21
Lowville	9, 13	86	21, 24	51	66. 2	2. 53	3, 16	87	20	46	67. 3	3. 58
Houseville							3	89	31	52	68. 8	6. 31
South Trenton	14	94	21	48	66. 1	4. 00						
Oneida	13	90	20, 22	52	64. 0	4. 49	7, 16	90	19	50	68. 9	5. 40
Depauville	6	84	22	53	65. 7	2. 68	14	88	20	50	67. 7	4. 40
Oswego	9	84			66. 2	2. 62	29	90	18, 20	53	68. 8	5. 91
Palermo	9, 13	93	22	52	65. 2	1. 40	4, 7, 11, 14	90	20	51	68. 8	5. 20
North Volney	13	92	21, 23	56	70. 1		3	92	10	54	71. 2	
Waterburgh	9	95	20	49	66. 6		4, 16	92	20	48	68. 6	
Nichols	9	91	22, 24	50	68. 4		15	94	19	50	70. 9	
Newark Valley	2, 9, 13	88	23	49	67. 8	5. 40	15	95	20	50	69. 8	5. 90
Himrods	9	88	22	50	66. 1	1. 80	16	92	20	51	69. 7	3. 06
Rochester	9	92	19, 20	57	71. 7	3. 00	11	96	19	56	73. 1	4. 90
Little Genesee	9	91	22, 23	48	66. 2	3. 32	15	94	19	42	68. 0	3. 48
Angelica	9	89	23	44	66. 2	3. 02	15	93	19	42	68. 4	3. 72
Carlton	14	90	21, 25	54	68. 0	1. 88	15, 16	88	19	52	69. 4	3. 25
Lockport	13	89	19, 21, 22	56	68. 4	2. 85	15	92	25	56	70. 4	5. 83
Buffalo	13	92	22	51	69. 5		7	93	31	55	73. 6	4. 43
NEW JERSEY.												
Jersey City	15	89	25	60	74. 1	4. 87	12	89	21	62	75. 3	3. 78
Newark	10, 13, 15	86	23	56	71. 5	4. 14	12	86	21	56	73. 1	5. 31
South Orange	6	88	23	55	69. 8	4. 56	12	90	19	50	69. 7	4. 61
Trenton	6	90	1, 25	62	76. 2	6. 54	4	90	20	62	77. 2	5. 14
Rio Grande	9, 11	90	25	54	69. 7	14. 13	8	94	20	53	73. 3	3. 25
Moorestown	6	87	1, 25	59	72. 3	6. 22	5, 7	89	20	60	73. 3	6. 82
New Germantown	9	90	22	58	71. 4	3. 67	7, 12	89	19	52	73. 2	9. 48
Readington	6	92	22, 24	58	71. 6		7, 12	92	20, 21	56	73. 6	
Greenwich	11	88	22	58	73. 4	5. 14	16	84	20	59	75. 9	1. 67
Vineland	11	93	23	57	74. 9	9. 82	16	91	31	60	76. 2	3. 02

Table showing the range of the thermometer, &c., for July and August—Continued.

Stations in States and Territories.	JULY.						AUGUST.					
	Date.	Maximum temperature.	Date.	Minimum temperature.	Mean temperature.	Rain-fall.	Date.	Maximum temperature.	Date.	Minimum temperature.	Mean temperature.	Rain-fall.
PENNSYLVANIA.		*Deg.*		*Deg.*	*Deg.*	*In.*		*Deg.*		*Deg.*	*Deg.*	*In.*
Nyces	2	89	22	52	68.3	4.50	3	90	20	46	70.6	11.10
Hamlinton	13	86	20, 22	52	68.3	7.63	16	91	31	51	72.4	4.73
Dyberry	2, 13	84	23	47	65.5	7.68	15	88	31	50	67.6	5.22
Fallsington	10	89	25	60	72.0	5.70	16	88	20	61	73.0	4.00
Philadelphia	10	89	25	61	75.6	6.38	16	90	23	64	77.2	6.13
Germantown (M.)	8	90	22	54	73.7	.....	7, 16	91	20, 23	61	75.0	.....
Do (T.)	13	88	22	58	75.1	6.04	16	88	20	60	75.0	3.17
Horsham	15	86	22	56	70.8	6.35	16	87	20	57	72.9	6.63
Plym'th Meeting	15	88	24	57	72.2	4.51	16	89	20	57	74.4	4.49
Egypt	16	94	22	50	71.8	.....	16	96	20	49	74.5	.....
Factoryville	13	90	22, 23	50	67.7	13.05	15	91	19, 20, 31	52	70.3	6.68
Reading	15	88	22, 23, 24	59	73.3	5.13	16	94	20	57	75.7	5.12
West Chester (M.)	6, 13	90	22	56	72.4	7.38	16	92	.....	.....	74.4	6.60
Do (J.)	15	87	1	59	74.7	6.68	16	87	23	63	75.4	2.87
Parkersville	11, 13, 15, 16	90	26	58	74.1	6.92	14, 15, 16	90	19, 31	63	76.4	5.00
Ephratah (S.)	9, 11	88	20	57	72.3	6.08	16	92	23, 31	62	75.6	9.98
Do (M.)	9	88	20	57	72.9	6.10	16	92	23, 31	62	75.3	10.38
Harrisburgh	11	95	21, 22	60	75.8	8.49	16	96	19	62	78.7	8.75
Carlisle	9	94	23	58	73.8	4.50	16	96	20	58	74.0	9.40
Mt. Rock	.....	.....	.....	.....	.....	.....	16	96	31	61	77.4	6.99
Fountain Dale	16	90	20	56	72.7	2.60	16	95	31	62	76.3	3.40
York Sulp'r Sp'gs	11	92	21	54	72.0	4.05	16	94	19	57	74.4	3.50
Tioga	14, 15	90	24	47	67.0	6.55	16	96	31	42	71.1	6.15
Lewisburgh	.....	.....	.....	.....	.....	.....	16	93	20	54	73.1	4.33
Grampian Hills	9	91	21	46	67.3	4.12	15	91	18	50	70.2	3.71
Johnstown	9	92	24	50	68.1	3.45	15	93	2, 20	52	71.8	5.12
Franklin	9	94	23	49	68.8	3.49	15	96	18	48	71.3	5.10
Greensburgh	9	97	21	51	70.4	5.50	13	95	18	55	73.2	6.40
Connellsville	9	94	21	52	73.0	.....	15	97	31	54	74.8	.....
Greenville	9	90	21	50	67.8	6.40	15	90	18	50	70.3	6.80
Newcastle	9	95	22, 23	47	72.1	5.80	14, 15	94	18	45	74.5	3.00
Beaver	9	88	21	56	72.3	.....	.....	.....	.....	.....	.....	.....
Cannonsburgh	9	94	25	51	70.3	3.25	16	93	18	52	72.8	5.31
DELAWARE.												
Dover	6, 11	94	21	60	76.0	8.20	16	94	31	64	76.8	1.20
Milford	11	96	20, 23	59	75.1	10.00	7, 8, 16	91	20	58	77.8	3.70
MARYLAND.												
Woodlawn	13	90	21, 25	60	73.3	4.65	15, 16	88	20	60	75.8	4.61
Annapolis	10	91	22	58	76.9	7.91	16	92	31	64	79.9	1.06
Woodstock Coll	11	89	21, 22, 23	57	71.9	5.17	16	90	21	52	74.0	1.78
Sam's Creek	13	91	25	58	74.3	4.58	16	94	31	63	76.8	3.30
Frederick	.....	.....	.....	.....	.....	.....	16	99	20	65	79.9	1.10
Cumberland	9	90	22	54	73.5	1.10	15	91	31	58	76.0	3.20
DIST. OF COLUMBIA.												
Washington	7, 10	88	22	60	78.5	6.55	16	89	20	64	78.2	1.80
VIRGINIA.												
Johnsontown	7, 10	92	22	61	74.9	5.30	16	89	31	66	77.6	5.00
Capeville	.....	.....	.....	.....	.....	.....	5	94	31	68	81.6	.....
Hampton	7	97	22	58	77.0	5.90	5	94	31	70	79.5	5.57
Surry C. H	9, 11	102	22, 23	62	80.3	2.70	17	99	31	64	81.6	3.03
Comorn	10	91	21	61	76.6	5.06	16	94	20	65	79.3	2.55
Mt. Solon	3, 6, 7, 8	87	21, 23	52	71.0	2.00	16	94	31	54	75.4	3.04
Vienna (W.)	16	93	21	58	74.6	4.50	16	99	31	62	79.2	1.20
Do (B.)	7, 29	84	21	58	72.0	1.88	18	94	10	62	78.0	2.50
Accotink	6	93	22	59	76.3	3.66	15	94	21	65	78.2	1.50
Near Waterford	11	95	21	57	74.6	.....	16	102	31	60	80.0	7.70
Piedmont	10	94	21	53	72.2	4.90	16	99	31	62	79.2	1.20
Piedmont Station	6	93	25	56	75.9	2.75	15	96	11, 21, 31	68	74.8	1.15
Markham Station	10, 16	89	20, 21	58	74.5	.....	14	92	31	62	75.9	6.70
Keswick Station	9, 10	98	21	58	77.4	1.25	16	102	31	63	81.9	2.10

Table showing the range of the thermometer, &c., for July and August—Continued.

Stations in States and Territories.	JULY.						AUGUST.					
	Date.	Maximum temperature.	Date.	Minimum temperature.	Mean temperature.	Rain-fall.	Date.	Maximum temperature.	Date.	Minimum temperature.	Mean temperature.	Rain-fall.
VA.—Continued.												
		Deg.		*Deg.*	*Deg.*	*In.*		*Deg.*		*Deg.*	*Deg.*	*In.*
Lexington	9, 11	91	22	52	72. 9	4. 09	16	92	21, 31	63	78. 3	3. 75
Lynchburg	9	90	22, 23	61	.....	4. 13	.....	.....	.....	.....	.....	.....
Near Wytheville	9	88	23	51	71. 2	1. 70	3, 13	89	31	56	73. 3	3. 40
WEST VIRGINIA.												
Weston	8	93	25	54	72. 8	.....	15	94	31	54	74. 5	.....
Cabell C. H	31	93	20	53	72. 4	4. 10	5	96	31	52	71. 8	0. 80
NORTH CAROLINA.												
Oxford	9	94	22	58	77. 0	3. 75	18	98	31	62	79. 1	2. 35
Fayetteville	9	97	24	62	81. 0	1. 60	16	92	3	68	78. 7	7. 40
Albemarle	10, 12	98	23, 26	52	77. 9	3. 05	7, 16	99	21, 31	56	79. 3	2. 38
Statesville	9, 10 11, 12	94	24, 25	52	76. 4	7. 00	17	98	21, 31	54	77. 3	2. 75
Asheville (A.)	10	93	24	53	71. 2	3. 20	3, 16	88	21	57	72. 4	7. 40
Do (H.)	8	84	24	50	70. 5	.....	3, 5	82	31	56	72. 8	.....
SOUTH CAROLINA.												
Aiken	10	95	26	66	80. 0	4. 88	3	96	21	67	78. 6	7. 96
Gowdeysville	9, 10, 12	95	24, 25	64	81. 5	1. 63	5	94	21, 31	66	81. 7	4. 30
GEORGIA.												
Berne	9, 10	90	25	63	76. 6	4. 55	10	89	20	66	75. 7	13. 95
St. Mary's	10, 11, 16	92	27, 28	73	81. 1	4. 49	4	90	21	73	80. 6	9. 73
Sandersville	13, 16, 31	94	23, 24	68	81. 0	.....	.....	.....	.....	.....	.....	.....
Atlanta	8, 17	93	27	68	80. 4	2. 00	.....	.....	.....	.....	.....	.....
ALABAMA.												
Huntsville	18	90	23, 24	65	78. 9	2. 00	4	90	31	63	79. 9	6. 00
Carlowville	10, 11, 12 16, 17, 18	96	24, 25, 26	72	84. 5	0. 85	22	98	21, 24, 26	72	83. 4	4. 71
Selma	17	97	26, 27	72	84. 5	1. 40	22	98	21	74	84. 7	4. 05
Moulton	7, 8, 17, 18	90	23	63	78. 2	.....	4	89	31	61	77. 2	2. 49
Greene Springs	7, 16, 17	97	21, 26	70	83. 0	2. 95	22	98	31	71	84. 0	4. 70
Coatopa	6	97	26	68	77. 5	2. 00	17	98	21, 22, 30, 31	70	83. 1	0. 20
FLORIDA.												
Near Port Orange	15	95	24, 25	70	79. 2	3. 09	22	91	2	72	78. 7	16. 97
New Smyrna	10	92	24	70	81. 5	3. 30	22, 23	90	1	73	81. 7	23. 00
Jacksonville	11	97	24	71	83. 8	3. 95	9, 31	95	18	72	81. 5	13. 70
Picolata	10, 11	93	26	71	82. 3	.....	4	94	18	73	80. 9	.....
Pilatka	8, 10, 11	98	25	66	82. 5	4. 30	29	95	21	72	81. 3	21. 35
Ocala	.....	.....	.....	.....	.....	.....	4, 8, 9, 31	96	25	64	80. 8	.....
Tampa	10, 27	92	25	67	76. 1	5. 30	23	89	25	67	75. 6	13. 45
Welborn	10, 11	96	26	68	83. 5	2. 63	5	96	21	76	83. 8	12. 21
TEXAS.												
Clarksville	16	100	1	72	85. 7	.....	.....	.....	.....	.....	.....	.....
Near Clarksville	16	97	22	70	.....	2. 37	.....	.....	.....	.....	.....	.....
Houston	3, 5, 20	99	9	77	84. 6	.....	14, 27, 29	99	25, 31	76	85. 5	.....
Gilmer	16	100	3	73	84. 1	1. 76	.....	.....	.....	.....	.....	.....
Clear Creek	31	97	28	76	82. 7	3. 80	23, 24, 29	98	16	71	84. 4	2. 88
Oakland	21	103	5	76	86. 9	0. 85	24	102	25	70	86. 9	2. 85
Sand Fly	21	100	24, 27, 28	78	89. 9	0. 10	7, 12	101	25	74	87. 3	0. 30
Bluff	21	97	1	78	87. 3	.....	6, 7, 12	99	25, 30, 31	78	87. 2	3. 19
Victoria	20, 21, 22	104	7	84	91. 1	0. 50	12	106	16, 17	82	91. 2	1. 10
Clinton	15, 19, 21, 31	100	22	78	86. 1	0. 75	24	102	17	75	85. 7	0. 80
Austin	31	100	5, 7, 11	77	86. 9	.....	7, 12	102	31	72	86. 1	2. 14
San Antonio	2, 3, 19, 23, 30	102	6, 11	75	87. 3	0. 02	12	104	31	75	86. 9	1. 74

Table showing the range of the thermometer, &c., for July and August—Continued.

Stations in States and Territories.	JULY.						AUGUST.					
	Date.	Maximum temperature.	Date.	Minimum temperature.	Mean temperature.	Rain-fall.	Date.	Maximum temperature.	Date.	Minimum temperature.	Mean temperature.	Rain-fall.
LOUISIANA.		*Deg.*		*Deg.*	*Deg.*	*In.*		*Deg.*		*Deg.*	*Deg.*	*In.*
New Orleans	17	94	24, 27	73	81.0	4.70	20	94	6	73	80.1	3.80
Shreveport	7, 17	95	22, 23, 24	72	84.6	.....	8	97	29, 31	74	85.4	.....
Ponchatoula	5	98	26	74	85.0	10.35	18	98	8	77	84.8	4.40
MISSISSIPPI.												
Marion Station	16	102	26	68	82.9	4.20	3, 5	100	20, 21, 23	68	81.2	1.20
Philadelphia	17, 18, 19, 20	92	25, 26	65	76.0	2.80	2	92	31	70	80.7	3.50
Grenada	16	93	24, 26	65	78.9	6.20	11	92	20	64	80.2	2.47
Near Brookhaven	6, 16, 17	96	25	73	84.0	4.80	14, 19, 24, 26, 27	94	22	66	83.3	3.30
Holly Springs	17	99	27	60	79.4	9.00	1, 2	96	31	62	77.1	2.20
ARKANSAS.												
Pocahontas	8, 17	103	23	58	81.6	.....	.....	.....	.....	.....	.....	.....
Helena	7	97	24	67	80.1	.....	.....	.....	.....	.....	.....	.....
Clarksville	8, 15, 16, 17, 18	99	21	71	79.7	2.20	7, 22	100	31	60	82.5	1.25
Washington	8, 15, 16, 17, 18	92	23, 24, 29, 31	72	70.1	4.13	11, 12, 21, 22, 24	92	2, 30, 31	72	80.8	1.00
Mineral Springs	8, 16, 17, 19, 20	98	22	62	78.3	5.23	7, 8, 10, 11, 12, 21, 24, 25	98	18, 19, 20	62	80.8	3.25
TENNESSEE.												
Elizabethton	9	96	22	50	74.1	3.19	4, 7, 13, 14, 15, 16	96	31	51	77.0	2.65
Tusculum College	8	89	23, 24	62	76.3	1.80	.....	.....	.....	.....	.....	.....
Lookout Mount'n	7	90	22	63	78.0	.....	4	93	31	66	79.1	6.37
Clearmont	7	91	21	60	75.6	2.90	2, 15	92	31	59	75.3	4.78
Austin	7, 8, 10, 16	94	24	60	78.0	3.50	2, 16	96	19	58	79.3	7.80
Clarksville	8	91	23	57	75.3	2.58	3	92	31	55	76.3	2.41
Trenton	8, 16	98	1, 2	64	79.4	3.20	2, 3	94	31	57	79.1	2.60
La Grange	7	96	26	65	80.1	7.50	3, 25	94	31	64	80.2	1.00
Knoxville	10	93	22	61	73.2	3.22	2	95	31	54	78.8	3.79
KENTUCKY.												
Pine Grove	8, 9	96	20, 21, 22, 23	60	74.2	1.75	13, 14, 16	98	31	60	77.6	3.45
Near Louisville	8	99	23	50	77.2	2.22	14	102	18, 31	52	79.2	3.04
OHIO.												
Salem	9	98	22	50	70.4	5.80	7	100	31	50	73.8	2.97
New Lisbon	9	88	21	50	70.2	6.43	.....	.....	.....	.....	.....	.....
Steubenville	9	93	21, 22	55	73.0	3.44	16	91	20, 31	58	75.4	6.40
Martin's Ferry	.....	.....	.....	.....	.....	.....	15	96	18	54	74.7	.....
Painesville	9	90	23	50	69.0	3.80	15	90	31	54	71.3	7.70
Milnersville	14	88	22	48	68.0	7.09	15	95	31	48	70.2	5.70
Cleveland	9	87	22	54	69.0	3.42	.....	.....	.....	.....	.....	.....
Adams's Mills	9	96	22	55	72.8	2.39	15	98	18	57	76.0	5.23
Pennsville	9	98	20	52	76.4	5.60	.....	.....	.....	.....	.....	.....
Gallipolis	9	96	21	52	75.1	3.46	16	98	31	60	78.6	2.27
Oberlin	9	96	22	50	69.5	1.50	.....	.....	.....	.....	.....	.....
Sandusky	8	90	20, 23	59	72.2	3.90	15	95	31	57	72.1	8.21
Carson	9	93	19	57	72.7	3.17	.....	.....	.....	.....	.....	.....
North Fairfield	9, 14	88	20, 22	54	71.6	2.91	15	94	31	56	73.1	7.00
Westerville	8	91	22	53	71.4	1.50	15	96	31	53	72.9	3.86
North Bass Isl'd	8, 14, 16	91	19, 28	58	73.1	2.00	15	100	31	57	74.1	3.63

Table showing the range of the thermometer, &c., for July and August—Continued.

Stations in States and Territories.	JULY.						AUGUST.					
	Date.	Maximum temperature.	Date.	Minimum temperature.	Mean temperature.	Rain-fall.	Date.	Maximum temperature.	Date.	Minimum temperature.	Mean temperature.	Rain-fall.
OHIO—Continued.		*Deg.*		*Deg.*	*Deg.*	*In.*		*Deg.*		*Deg.*	*Deg.*	*In.*
Marion	8	94	19, 20	54	71.7	3.84	15	95	31	52	72.5	5.08
Hillsboro	8, 9	90	20, 21	56	71.8	4.15	3, 14, 15, 16	89	18, 31	58	74.5	4.97
Bowling Green	9	99	22	55	76.2	5.30	15	101	30	55	75.0	2.89
Kenton	10	99	19, 23	68	80.2	3.00	24	100	31	60	80.6	12.81
Bellefontaine	8	94	19	52	70.5	2.73	15	94	31	53	73.4	9.80
Urbana Univ	8	93	22	53	72.7	2.45	15	96	31	56	74.8	6.48
Bethel	8, 9	94	22	55	72.3	5.25	15. 16	96	31	54	73.8	3.87
Edgerton	8	94	19, 20, 24	54	72.3	1.25						
Carthagena	8	93	22	55	74.5	3.88	15	97	31	56	78.5	4.27
Farmer							15	96	30	55	70.1	4.30
Jacksonburgh	8	94	1	52	73.3	2.82	16, 23	94	31	58	75.4	8.75
Oxford	8	98	22	57	74.8	2.03	16	98	30, 31	58	75.8	6.07
Mt. Auburn Inst.	8, 9	93	21	58	76.0	4.62	16	93	31	59	77.8	5.89
Cumminsville	8	94	23	56	72.5	5.12	4	89	31	55	72.7	7.24
Cincinnati (H.)	9	95	21	57	74.8	3.37	16	95	31	55	76.9	5.22
Do (P.)	9	97	30	51	77.6	4.75						
College Hill	8, 9	98	22, 23	60	77.6	5.13	14, 15, 16	94	31	62	77.4	8.30
MICHIGAN.												
Detroit	14	96	19	54	72.1	4.12	15	98	30	55	71.4	1.91
Monroe City	9	98	19, 28	58	75.9	2.53	20	95	30	58	75.6	2.35
Ann Arbor	8	91	19	55	71.8	2.02	15	98	30, 31	56	72.6	2.32
Alpena	2, 13	75	21	51	62.8	3.77	6	76	30, 31	52	65.0	0.88
State Agr'l Col	13	95	19	49	70.6	3.10	15	100	19, 30, 31	54	71.3	1.42
Olivet College	8	94	19, 20, 22	54	71.8	3.50						
Litchfield	8	92	20, 22	53	69.5	3.40	15	92	30, 31	54	69.3	4.18
Coldwater	13	93	20, 23	47	69.1	1.63						
Battle Creek							14	95	31	54	71.6	12.61
Grand Rapids(H.)	13	98	19	55	73.2	1.71	15	96	31	54	72.8	2.00
Do (S.)	13	91	19	53	71.0	1.68	14, 15	90	31	41	70.2	2.85
Northport	12	90	19	50	65.4	4.25	2	89	31	52	67.3	1.87
Benzonia	12	90	20	53	67.2	2.90	6	88	31	51	68.0	1.90
Copper Falls	12	93	18	44	60.9	1.35	1	85	27	45	61.9	4.90
Ontonagon	12	92	27	50	63.1	3.00						
INDIANA.												
Fort Wayne	8	99	20	57	77.4	2.50	15	98	31	55	73.9	4.30
Aurora	8	102	21, 22	59	75.7	5.48	15	102	31	58	77.2	4.06
Rising Sun	8	93	22	55	73.4	5.45	16	94	31	56	75.5	3.37
Vevay	8	97	23	58	75.2	3.82	16	96	31	56	77.3	4.06
Mt. Carmel	8	98	21	60	77.4	3.58	13	96	31	65	79.1	3.52
Spiceland	8	98	20, 22	57	75.0	1.68	14, 15	99	30, 31	54	76.5	2.78
Laconia	8	98	20	59	75.8	3.22	2, 3	96	31	56	76.8	4.95
Knightstown	8	100	18, 19, 21	59	75.0	2.18						
Beech Grove	8	95	23	53	72.6	3.15	15	96	31	48	71.9	4.73
Bloomington	8	95	22	58	74.3	4.65	15	92	31	55	74.8	3.47
Rensselaer	8, 9	96	21	57	74.2	7.10						
Merom	9	98	22	61	78.3	3.30	14	97	31	55	78.1	1.45
New Harmony	8	98	22	63	78.4	2.06	15	98	31	57	81.8	1.24
ILLINOIS.												
Chicago	8	101	23	60	77.1	2.55	14	99	31	58	76.2	1.65
Near Chicago	8	102	19	56	74.7		14	98	31	60	74.0	1.25
Evanston	8	92	20	59	70.4	2.33	14	86	30	57	72.1	3.41
Marengo	30	93	21	51	70.2	1.04	14	93	31	43	69.4	3.07
Mattoon	8	102	24	60	78.8	7.70	14	101	31	53	79.0	4.00
Aurora	8	90	19	53	75.6	1.75	14, 15	96	30	50	73.6	1.97
Louisville	8	100	20	60	74.6	3.50	15	104	31	56	79.7	2.35
Belvidere	8, 30	94	23	55	72.5	2.58						
Sandwich	8	95	19	58	73.9	2.06						
Decatur	8	100	24	63	77.5	1.85	15	101	31	51	77.5	1.05
Pana	8	98	20	60	77.0	1.65	14	95	31	56	77.2	1.90
Rochelle	8	92	19	53	73.2							
Wyanet	30	95	24, 28	53	73.2	1.89						

Table showing the range of the thermometer, &c., for July and August—Continued.

Stations in States and Territories.	JULY.						AUGUST.					
	Date.	Maximum temperature.	Date.	Minimum temperature.	Mean temperature.	Rain-fall.	Date.	Maximum temperature.	Date.	Minimum temperature.	Mean temperature.	Rain-fall.
ILLINOIS—Con'd.		Deg.		Deg.	Deg.	In.		Deg.		Deg.	Deg.	In.
Tiskilwa	8, 12, 30, 31	96	1, 22	60	76.3	.....	14	99	31	47	75.1	.....
Hennepin (O.)	8	98	23	54	76.8	1.80	15	98	31	48	76.0	3.60
Peoria	8	96	23	62	76.7	3.76	15	96	31	49	75.7	4.95
Havana	8	98	20	60	76.9	5.25	1	98	30, 31	54	75.8	2.15
Waterloo (J.)	16	98	2	60	75.7	4.50	14, 21	96	29	54	72.1	3.90
Dubois	8	98	22	63	78.6	1.09	10. 15	100	31	58	81.3	2.60
Galesburgh	8	90	20	61	76.0	3.51	14	90	31	52	73.9	6.46
Manchester	9	95	20	62	77.5	1.40	15	98	31	53	76.4	0.80
Mt. Sterling	8, 31	90	20, 21	63	76.8	2.20	15	93	31	60	78.1	5.22
Andalusia	9	92	20, 22	58	75.0	1.88	1, 3, 12, 14, 15	90	31	46	74.2	2.32
Oquawka	8, 9, 13, 14, 15	95	20	63	78.2	1.79	1, 14	95	30, 31	57	76.6	12.00
Augusta	31	93	20	64	77.2	2.81	15	95	31	51	75.2	6.48
Warsaw	8, 31	94	20, 21, 22, 23	62	75.5	2.34	7	96	31	55	75.2	2.25
WISCONSIN.												
Sturgeon Bay	12	92	19, 20	54	68.8	1.85	3	94	30, 31	53	68.7	1.10
Manitowoc	13, 15	90	20	53	68.1	3.42	.....	.....	.....	.....	.....	.....
Hingham	13	90	21	55	70.7	.....	6	90	31	53	69.3	.....
Milwaukee	8	96	22, 24	52	70.2	1.84	6	93	5	47	69.2	3.77
Geneva	8, 12, 15	95	22	52	72.0	2.43	1	97	31	50	70.9	4.16
Waupaca	12	92	21	55	71.8	.....	3	92	30, 31	55	69.7	.....
Embarrass	12, 15	92	13, 20, 28	50	71.5	3.00	3	92	24	50	64.5	4.70
Rocky Run	8	91	19, 21	54	71.5	5.50	14	89	31	50	69.3	2.87
Madison	.....	.....	.....	.....	.....	.....	10	91	31	52	69.8	3.35
Edgerton	30	100	22	54	74.7	4.30	1	96	29, 31	55	72.7	6.20
Mosinee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6.80
Baraboo	8	94	28	56	72.9	2.13	14	94	31	50	70.6	3.56
New Lisbon	13, 30	94	22	59	72.3	.....	2	90	30, 31	50	67.3	.....
Bayfield	12	96	20, 27	56	68.3	.....	.....	.....	.....	.....	.....	.....
MINNESOTA.												
Beaver Bay	13, 17	87	4, 10, 27	50	62.7	3.67	.....	.....	.....	.....	.....	.....
Beaver	8, 30	88	1, 6	50	70.4	2.65	1	88	31	44	65.7	2.60
St. Paul	8	90	19	55	71.3	1.78	1	93	31	47	69.5	4.83
Minneapolis	12	93	19, 21	53	70.0	1.93	1	92	31	45	67.9	5.40
Sibley	30	94	22	47	70.3	0.25	1, 2	93	31	36	68.5	3.03
Litchfield	15	92	13	52	68.1	2.90	1	89	30	44	66.1	2.40
New Ulm	15	97	19	56	73.0	3.88	1	95	30	53	71.7	2.50
IOWA.												
Dubuque	8, 30	97	20	56	76.3	1.29	1, 10	96	31	49	72.1	6.40
Monticello	30, 31	98	22	56	74.3	2.05	1, 14	96	31	46	72.2	5.15
Durant	16	98	19	56	74.3	2.70	14	101	31	50	72.6	4.45
West Branch	.....	.....	.....	.....	.....	.....	14	95	31	48	72.7	4.13
Bowen's Prairie	30	98	19, 22, 23	58	73.5	0.50	.....	.....	.....	.....	.....	.....
Fort Madison	31	96	21, 22	62	78.1	4.07	14, 15	96	30, 31	56	75.8	7.45
Guttenberg	30	100	19, 20, 21, 23	52	71.2	.....	1	96	30, 31	46	69.4	.....
Mount Vernon	13, 30	95	21	57	73.8	.....	1, 14	97	31	50	72.2	.....
Iowa City	8	82	7	50	73.3	6.56	10	95	31	44	71.8	5.23
Independence	30	102	20	55	75.1	2.65	1	105	31	45	73.8	2.47
Near Independe'e	30	97	18, 23	62	74.7	1.90	1, 2	98	31	44	71.6	3.30
West Union	30	100	20	57	74.8	1.14	14	96	31	48	73.8	4.40
Rockford	8	90	22	57	71.2	.....	1	89	31	50	69.6	.....
Ames	15, 30	96	19	60	75.2	7.70	14	96	30, 31	52	73.8	4.96
Algona	15, 31	94	19	57	74.1	.....	1	94	30	46	70.6	.....
Boonesboro	8	91	1, 2	55	71.0	5.72	7.10	91	31	40	71.9	5.10
Afton	15, 16	91	22	57	72.7	4.00	7	92	30, 31	48	70.6	4.90
Fontanelle	16	100	21	58	75.9	5.00	13	97	30, 31	51	72.9	6.00
Grant City	30	98	19	55	74.0	3.20	13	98	31	45	73.4	5.80
Sac City	18	91	3	57	70.6	4.40	1, 13	92	25	52	69.3	5.10

Table showing the range of the thermometer, &c., for July and August—Continued.

Stations in States and Territories.	JULY.						AUGUST.					
	Date.	Maximum temperature.	Date.	Minimum temperature.	Mean temperature.	Rain-fall.	Date.	Maximum temperature.	Date.	Minimum temperature.	Mean temperature.	Rain-fall.
IOWA—Cont'd.		*Deg.*		*Deg.*	*Deg.*	*In.*		*Deg.*		*Deg.*	*Deg.*	*In.*
Logan	16	87	20	52	70.2	7.60	13	92	5	42	69.9	2.60
Woodbine	.....	.....	.....	.....	.....	.....	13	94	31	40	69.7	3.10
Council Bluffs	16	91	19	59	74.4	9.95	7, 13	90	30	51	72.9	3.55
MISSOURI.												
St. Louis Univ	16	98	20	66	79.6	1.41	15	96	31	58	78.8	4.28
Allenton	8	100	23	54	76.6	4.48	.....	.....	.....	.....	.....	.....
Hematite	16	96	23	50	77.9	4.76	14	99	31	55	78.2	1.21
Hannibal	8, 16	94	20	62	77.0	2.80	.....	.....	.....	.....	.....	.....
Rolla	8, 15	93	23	52	76.1	4.90	22	99	31	45	74.0	5.44
Jefferson City	17	95	17	60	75.0	.....	.....	.....	.....	.....	.....	.....
Cave Spring	15, 16	95	20	58	76.8	.....	21	98	30	52	75.6	3.20
North Springfield	16	95	24	59	76.7	1.74	.....	.....	.....	.....	.....	.....
Mount Vernon	18	96	20	56	77.4	5.05	7, 8	94	30	55	76.9	4.31
Kansas City	9, 15, 16	96	25	65	77.2	5.35	14, 21	96	30	55	76.5	2.18
Oregon	15	93	20, 22	63	76.2	4.50	13, 14, 21	94	30, 31	54	74.3	3.40
Corning	15	93	2	58	77.3	3.92	21	97	30	54	75.0	2.20
KANSAS.												
Atchison	16	98	21	62	78.3	6.40	14	99	30	54	76.7	2.90
Williamstown (C.)	9, 16	103	19	64	82.3	6.55	14, 15	101	31	48	75.7	2.76
Leavenworth	16	96	19	60	77.3	6.31	.....	.....	.....	.....	.....	.....
Williamsburgh	16	96	20	63	78.0	6.37	15	97	30	56	76.2	3.95
Paola	15, 16, 17	93	19, 24	63	77.5	5.42	14, 21	96	31	52	75.5	2.20
Baxter Springs	13	98	24	62	80.4	6.70	13	98	30	62	78.2	3.00
Holton	16	103	20	60	80.4	7.38	7, 14, 21	100	30	55	75.3	2.87
Le Roy	17	100	19	62	82.1	4.31	14, 15	100	30	53	7.99	3.78
State Ag'l College	16	96	21	64	76.7	5.69	7, 13, 14, 21	94	30	53	76.3	4.25
Council Grove	16	96	20	61	79.0	7.20	21	96	29	48	75.4	5.50
Douglass	16	99	21	64	79.2	7.30	12, 13, 14, 21	98	29	58	77.9	4.40
Holden	16	99	19	63	80.5	5.30	7, 21	98	29	55	77.6	0.70
Burlingame	16	96	.....	.....	.....	2.20	.....	.....	.....	.....	.....	3.56
NEBRASKA.												
Omaha Agency	16	97	19	59	75.7	2.90	7	95	28	50	73.2	1.56
De Soto	16	95	3, 19	57	73.8	8.00	13	99	30	49	72.8	1.63
Bellevue	8, 16	94	3	61	76.4	14.01	13	95	30	52	74.6	3.30
Nebraska City	8, 16	94	19, 21	61	76.3	8.50	.....	.....	.....	.....	.....	.....
Emerson	14	96	22	58	72.2	9.40	.....	.....	.....	.....	.....	.....
Newcastle	29	108	7	61	.....	.....	.....	.....	.....	.....	.....	.....
Santee Agency	16	98	19	56	75.0	2.02	2	98	30	48	73.5	1.35
UTAH.												
Coalville	13, 14, 19	98	3	49	72.2	.....	2, 17	95	13	47	68.2	.....
CALIFORNIA.												
Monterey	5	80	31	47	62.5	.....	19	83	2	48	62.2	.....
Chico	1	111	30, 31	68	84.5	.....	29	112	14	64	84.2	.....
Watsonville	21	84	11	50	65.6	0.00	18	86	1, 12	52	63.0	.....
Mendocino	9	70	25	51	61.5	.....	6, 7, 9, 17, 24, 27, 28	68	17	54	59.9	.....
Visalia	18	105	30, 31	66	82.7	0.00	.....	.....	.....	.....	.....	.....
Taylorsville	2, 18	99	29	40	73.5	0.00	4	98	2	48	75.2	.....
San Diego	22	83	1, 2, 3, 7, 8, 11	63	69.3	0.00	18	86	12	60	70.5	0.00
ARIZONA.												
St. Thomas	13, 14	118	23	75	.....	.....	.....	.....	.....	.....	.....	.....

Table showing the range of the thermometer, &c., for July and August—Continued.

Stations in States and Territories.	JULY.						AUGUST.					
	Date.	Maximum temperature.	Date.	Minimum temperature.	Mean temperature.	Rain-fall.	Date.	Maximum temperature.	Date.	Minimum temperature.	Mean temperature.	Rain-fall.
MONTANA.		*Deg.*		*Deg.*	*Deg.*	*In.*		*Deg.*		*Deg*	*Deg.*	*In.*
Deer Lodge City	15	97	8, 9	43	66. 0	1. 20	17	96	22	41	62. 0	0. 55
Missoula	20	99	8	38	74. 2	0. 97	7	97	15	46	72. 0	.....
WASHINGTON.												
Cathlamet	9	92	7	48	61. 6	.....	22	94	8	48	62. 7	.....
Port Angeles	14, 15	67	11, 16	53	58. 2	.....	.....	.....	.....	.....	.....	.....
Union Ridge	9, 10, 20	90	6	56	69. 0	.....	5	98	9	53	69. 7	.....
COLORADO.												
Denver	13, 16	97	3	58	78. 0	0. 51	18	95	30	54	75. 2	0. 27
Colorado City	13	116	12, 18, 22	64	80. 8	3. 45	.....	.....	.....	.....	.....	.....
Golden City	15	99	3	57	78. 0	0. 80	18	96	27, 28	56	75. 3	0. 40
OREGON.												
Portland	2	90	7	58	70. 0	0. 55	5	96	31	53	71. 4	0. 45
Eola	2	85	21	44	63. 3	0. 32	5	91	18	44	67. 7	0. 04
Astoria	9	74	20, 22, 28	52	57. 4	1. 36	4	78	16	50	59. 1	0. 61
WYOMING.												
Laramie City	16	93	2, 4, 9	54	70. 0	.....	.....	.....	.....	.....	.....	.....

NOTES OF THE WEATHER.

JULY, 1871.

Houlton, Me.—Aurora 8th; no soaking rain; ground dry beneath.

Union, Me.—Haying 7th; cherries ripe 12th; corn silking 25th.

Norway, Me.—Grasshoppers destructive to 15th; slight earthquake 20th.

West Waterville, Me.—Damaging hail 20th. Heat about July average.

Gardiner, Me.—Month $\frac{3}{5}$° colder than mean of thirty-five years; dry till last week.

Lisbon, Me.—Slight earthquake 20th; haying finished generally 31st.

Peterboro, N. H.—Large hail, covering the ground, 16th.

Whitefield, N. H.—Very heavy thunder; earthquake shocks at 3 a. m. 20th.

Tamworth, N. H.—Frost 1st; earthquake 20th; long drought about ended.

Contoocookville, N. H.—Haying begun 3d; oats ripening 25th, harvested 28th.

Amoskeag, N. H.—Slight frost 18th; frequent showers 15th to 31st.

Lunenburgh, Vt.—Earthquake of 30 seconds, north to south, at 1 a. m. 20th.

Craftsbury, Vt.—Very dry till 20th, then wet till close—heavy rains.

East Bethel, Vt.—Heavy thunder-showers; fine hail 18th; earthquake 20th.

West Charlotte, Vt.—First real rain and wind-storm this season, 31st.

Panton, Vt.—Terrific thunder-storm 14th, with large hail, 4 inches deep, 28th.

Kingston, Mass.—Most of month very dry after great drought of May and June.

North Billerica, Mass.—Copious showers during last week in July.

Lunenburgh, Mass.—Earthquake, shaking houses, &c., north northwest to south southeast, 20th.

Middletown, Conn.—Heavy thunder, copious rain, and damaging hail 15th.

Southington, Conn.—Cicada (locust) 10th. Coldest July since 1859.

South Hartford, N. Y.—Fifteen light showers during July; one very heavy 31st.

Brooklyn, N. Y.—Month showery but pleasant; no signs of midsummer.

Cooperstown, N. Y.—Frost 24th; month 6° colder than in 1870.

North Hammond, N. Y.—Drought 1st; haying begun 5th; harvest 31st. Cool July.

South Trenton, N. Y.—Ground covered with hail, large as bantam eggs, 20th.

Depauville, N. Y.—Wheat harvest began 14th. Heat 3°.8 below mean of seven years.

Palermo, N. Y.—Coldest July in eighteen years, except in 1860, (62°.09;) warmest, 1868, (79°.12.)

Nichols, N. Y.—Wettest July (hardest showers) in many years.

Newark Valley, N. Y.—Very wet month; weather quite cool.

Little Genesee, N. Y.—Showers light; streams never lower, some dry.

Lockport, N. Y.—Month unusually cold; on 17th, before sunrise, 53°.5.

Newark, N. J.—In twenty-eight years, warmest July 1866, mean 76°.08; coldest, 1859, mean 70°.23; 1871, 71°.475; four Julys whose

means were lower than this, but none whose maximum was lower, and only one, 1863, as low. Locusts on 16th; no katydids yet, and few mosquitoes.

Rio Grande, N. J.—Grand thunder-storm 6th; rain 19th, overflowed gauge.

New Germantown, N. J.—Hail 16th, 28th; frequent showers, light winds.

Greenwich, N. J.—Showers on thirteen days; warm 6th to 16th; 20th to 26th needed fires; cool to 31st. Peaches 3d; tomatoes 10th; corn cooked 24th; sweet-potatoes 31st.

Vineland, N. J.—Violent hurricane 16th, houses, &c., destroyed. Very wet July.

Dyberry, Pa.—Very wet month, rain on sixteen days; destructive hail-storm 16th, hail piled up 6 to 12 inches deep in some places.

Horsham, Pa.—Month cool and wet; showers seen nearly every day.

Plymouth Meeting, Pa.—Temperature but once above 80°, 17th to 31st.

Factoryville, Pa.—Terrible tornado, demolishing buildings, trees, &c., 9th; hail-storm, size of hen's eggs downward, destroying crops, and even cattle, 16th; hail 6 inches deep covered several counties. A severely destructive month.

Parkerville, Pa.—Rains on eighteen days, four or five very heavy.

West Chester, Pa.—Heavy thunder-storms 3d, 6th, 11th, 16th, 27th. A wet month.

Ephratah, Pa.—Thunder and terrific hail-storm, damaging houses, &c., 6th.

Carlisle, Pa—Tornado from northwest in Perry and this county, with much hail, large as walnuts, destroying trees and crops, 16th. A showery month.

Fountain Dale, Pa.—Month dry; but little rain, yet damp air.

York Springs, Pa.—Hail storms frequent after 15th to 31st.

Tioga, Pa.—Month cool and wet; some nights cold; frost in some places.

Grampian Hills, Pa.—Terrific hail-storm, injuring fruit and crops, 16th.

Greensburgh, Pa.—Oats housed 24th; martins left 30th. Very cool July.

Newcastle, Pa.—Season two weeks earlier than ever known here.

Dover, Del.—Heavy thunder-storms 11th, 15th; heaviest rain in years 25th, 26th.

Milford, Del.—From 15th to close of month was cold and wet.

Woodlawn, Md.—Month 3° below average of six years, and cloudy and showery.

Johnsontown, Va.—Aurora 22d; first real rainy day this year 25th.

Hampton, Va.—First half of month hot and dry; last half cool and wet.

Surry Court-House, Va.—To 10th hot and dry; remainder showery and copious rains; 25th the coldest July day ever known here—fire was comfortable.

Comorn, Va.—Second and third weeks very wet, rest favorable. Rain-fall 5.06—average for twenty-two years 3.88.

Wytheville, Va.—Cutting oats 7th; katydids 27th. A very dry July.

Oxford, N. C.—The coldest July known to any person here.

Albemarle, N. C.—Storms, incessant thunder, 6th, 12th, 13th. Very dry month—crops drying up, and wells and springs failing.

Statesville, N. C.—Rain, incessant thunder, 6th; heavy rain 12th.

Aiken, S. C.—Rain on eight days, with hail on 18th.

Gowdeysville, S. C.—Slight rains and showers on six days.

Berne, Ga.—Frequent sprinkles and light showers on fifteen days.

Atlanta, Ga.—Heavy thunder-storm, and hail an inch deep 23d.

Moulton, Ala.—Cotton blooms 15th. Month dry to 10th, then copious rains; cool 18th to 28th, then dry and dusty.

Coatopa, Ala.—Thunder and lightning on eleven days, often without rain.

New Smyrna, Fla.—On 24th, sea and river water almost ice-cold; many fish died; water cold for several days. Air at 70° to 85° 24th to 31st.

Jacksonville, Fla.—A warm July till 25th, then three days cold.

Picolata, Fla.—Northeast winds since 22d, bringing intermittent fevers.

Pilatka, Fla.—All rains were thunder-storms. Cold 25th to 28th.

Welborn, Fla.—Isabellas and catawbas ripe 15th; scuppernongs ripe 22d.

Gilmer, Texas.—Month very dry; rains very light; crops suffering.

Oakland, Texas.—Hottest summer in many years; crops suffer from drought.

Sand Fly, Texas.—Highest mean of any month in twelve years; last rain June 8th.

Victoria, Texas.—Very little thunder and lightning; very dry; light winds.

Clinton, Texas.—Long drought and great evaporation; month hot.

Ponchatoula, La.—Rain in some directions, and thunder every day.

Brookhaven, Miss.—Recent rains have revived late crops; cold 25th.

Marion, Miss.—Chilly 21st; drying winds for a week past, 28th.

Washington, Ark.—Katydids 8th; cotton opening 31st; copious showers came in time to save the crops.

Elizabethton, Tenn.—Cloudy to 15th; eight thunder-storms in July.

Clearmont, Tenn.—Drought continues; month dry.

La Grange, Tenn.—Cool, pleasant days; nights chilly, 19th to 24th; cold rain 25th; fires needed 25th, 26th; then cool nights; warm, oppressive days to 31st.

Pine Grove, Ky.—After 13th dry; crops suffering; grass drying up.

New Lisbon, Ohio.—Frosts 19th, 20th, 21st; thunder-storm, hail 21st.

Cleveland, Ohio.—July mean for seventeen years: temperature 72°.38; rain 3.29 inches.

Adams's Mills, Ohio.—Hottest day for over twenty years 9th.

North Fairfield, Ohio.—Most destructive tornado ever known here 16th; hail large as one's fist; crops, buildings, trees, destroyed.

North Bass Island, Ohio.—Tornadoes; some damage 9th, little 16th. Mornings and evenings cool, noondays hot; vegetation drying up.

Hillsborough, Ohio.—Showers and sprinkles on thirteen days in July.

Kenton, Ohio.—Frost 23d, making frost every month this year. Ground dry.

Urbana, Ohio.—Thunder-storm, large hail, 9th. Month 3°.5 cooler than last year; 1°.19 below June. Rain 1.15 inches below average. Vegetation suffering.

Alpena, Mich.—Brightest aurora this year, covering whole northern sky, 21st; moderate 20th, 22d; sweet elder blossoms 31st.

Northport, Mich.—Month closes very dry, and vegetation suffering.

Vevay, Ind.—Violent thunder and rain storm 16th.

Mount Carmel, Ind.—Violent gale, then thunder-storm, 9th.

Laconia, Ind.—Terrific thunder, pouring rain and damaging gale, 16th.

Marengo, Ill.—Driest July on record; only one-fifth of average rain of ten years.

Mattoon, Ill.—First thunder-storm this month 27th; very warm and dry.

Aurora, Ill.—Frost 22d; killed buckwheat and vines in places.

Louisville, Ill.—Heavy thunder-storms 9th, 10th, 16th; cold 19th to 25th.

Belvidere, Ill.—Month dry. Some finished stacking grain by 31st.

Wyanet, Ill.—Thunder-showers frequent till 14th.

Havana, Ill.—Rain on 10th 4 inches. Entire season dry.

Dubois, Ill.—Katydids 1st. Month 2°.26 warmer than average of seven years. Average July rain for seven years 3.92 inches; this July 1.09 inches.

Mount Sterling, Ill.—To 14th, seven thunder-storms; dry to 31st.

Manitowoc, Wis.—Nine thunder-storms; large hail on 30th.

Waupaca, Wis.—Terrific thunder-storm, with high wind and hail, 8th.

Mosinee, Wis.—Southern lights with streamers to horizon 24th; slight frost 28th; harvest not yet begun 31st.

St. Paul, Minn.—Rain for seven months above average, yet the Mississippi is lower than in seven years and still falling.

Minneapolis, Minn.—Month nearly 3° lower than in 1870.

Guttenberg, Iowa.—Harvest stacked and part thrashed. Locusts gone by 12th. Pastures and cisterns dry, and Mississippi as low as ever known.

Iowa City, Iowa.—June 5th to July 2d 11.20 inches rain. Harvest three weeks early.

West Union, Iowa.—Ground dry at depth of 2 feet—temperature 68°, open air 89°.

Independence, Iowa.—Soaking rain 5th; coolest July weather known here; 28th, thermometer 102° in shade, 121° in sun 30th.

Ames, Iowa.—Too much rain 6th; hail 8th; tornado 13th; harvest ended 27th. Coolest and warmest July known here.

Algona, Iowa.—Soaking rain 28th. Month favorable for farmers.

Boonesborough, Iowa.—To 15th terrific wind, lightning, &c.; then fine harvest.

Logan, Iowa.—Heaviest rain known here 28th; bridges, &c., swept off.

Council Bluffs, Iowa.—Thunder-storms on seven days; heavy rains 28th, 29th.

St. Joseph, Mo.—Tornado, destroying buildings, trees, crops, &c., 13th.

Hematite, Mo.—Magnificent thunder-storm 10th; another, with tornado, 18th.

Jefferson City, Mo.—Hurricane 5th to 6th; thunder-storms, gales, 13th, 14th, 17th, 18th.

Cave Spring, Mo.—Hay and oats cut 1st; rain sufficient till 30th.

Oregon, Mo.—Katydids 1st; blackberries 5th; great storm, hail, 13th.

Williamstown, Kan.—Severe gale 2d; katydids 13th; cutting prairie grass 19th.

Paola, Kan.—Heavy blows; thunder 10th, 11th, 14th; gale 18th.

Holton, Kan.—More thunder-storms and rains than usual.

Burlingame, Kan.—Terrible lightning, killing grass in circles of from 20 to 50 feet in diameter, 6th, 10th, 14th, 17th.

Council Grove, Kan.—Over eighty days of clouds obscuring sun's rays, and more rain than in any July in ten years, except 1867.

De Soto, Neb.—Tornado, with hail, 5th—blew cars off the track of B. and F. Railroad; another 28th, with a deluge, doing immense damage by rain and by wind.

Emerson, Neb.—Great thunder-storm, gale, and 4.4 inches rain, 29th.

Bellevue, Neb.—Heaviest rain known here 1st; another, with hail, 28th.

Newcastle, Neb.—A dry summer, no rain, save a few drops.
Taylorsville, Cal.—Flaming auroras 7th, 10th; frosts 21st, 22d, severe 30th, 31st.
Deer Lodge City, Mont. Ter.—Severe frost 8th; new snow on mountains 9th.
Missoula, Mont. Ter.—Light frost 7th; frequent light showers.
Cathlamet, W. Ter.—Very dry month; no rain from June 2 to 27th inst.
Port Angeles, W. Ter.—Aurora 28th. Foggy and thick; only four clear days.
Union Ridge, W. Ter.—Auroras 21st, 26th. Month dry till 27th.
Templeton's Gap, Col.—Very heavy thunder-shower 31st. Month dry.
Eola, Oregon.—Thunder-showers 28th to 30th. Harvest begun 31st.
Laramie City, Wy. Ter.—More rain fell on 20th than in the previous year, and the heaviest ever known here on 22d, with some hail.

August, 1871.

West Waterville, Me.—Month 1°.69 warmer than average of last seven Augusts; 1.27 inches rain more than August average of seven years.
Gardiner, Me.—Auroras 5th, 13th, 17th, 19th, 21st, 24th. Mean temperature for thirty-five years 67°.019. Drought continued till 26th.
Lisbon, Me.—Severe hail-storm 5th; heavy rains 26th, 27th, 30th.
Amoskeag, N. H.—Slight frost 18th. Last of month quite wet.
Tamworth, N. H.—Hot night of 14th; auroras 5th, 17th; drought severe to 25th.
Troy, Vt.—Auroras 10th, 12th, 13th, 17th, 21st, 24th. Rain on eleven days.
East Bethel, Vt.—White frost 20th; long drought ended 26th.
Near St. Albans, Vt.—Thunder and hail storm 8th; light frost 20th.
West Charlotte, Vt.—An October day 19th; orioles and swallows gone 29th; drought ended 26th.
Lunenburgh, Mass.—Heavy thunder-showers 8th, 30th; high winds 27th.
North Adams, Mass.—Heavy thunder-storm, hail, 8th; rain, high wind, 21st.
Hinsdale, Mass.—Heavy rain, with almost a tornado, 27th.
Newport, R. I.—A very wet month, dense fogs, and much rain.
Moriches, N. Y.—A very cloudy and damp month; not very rainy.
Garrison's, N. Y.—More than usually uniform temperature and moisture.
Brooklyn, N. Y.—Frequent rains, some heavy; foliage green as in June.
North Hammond, N. Y.—To 26th great drought, ground baked, vegetation dried to a crisp; then dews, rains, reviving vegetation.
Lowville, N. Y.—Shooting stars seen 10th, 12th; 11th cloudy. Aurora 12th.
Depauville, N. Y.—Auroras 5th, 9th, 10th, 12th, 13th, 15th, 21st; meteors 10th, 12th, 13th, (11th cloudy;) thunder-storm, high wind, 29th.
Waterbury, N. Y.—Until the last week month very dry and warm.
Nichols, N. Y.—Many hazy days; rainiest August in twelve years.
Newark Valley, N. Y.—A heavy rain and severe hail-storm 24th.
Buffalo, N. Y.—Month 3°.97 warmer than the August average of thirteen years; rain-fall three inches above the average.
Newark, N. J.—Warmest August, 74°.61, 1864; coldest, 67°.3, 1866;

this, 73°.12=2° above average of twenty-eight Augusts. Average rain 5.11 inches, this month 5.31.

New Germantown, N. J.—Lightning on seven days; a very wet month.

Greenwich, N. J.—Warmest day of 1871, 16th; first rain in four weeks 23d. Summer mean 2°.33 below 1870, and 1°.04 below seven summers past.

Vineland, N. J.—A good season; warm month; farmers pleased.

Dyberry, Pa.—The last part of the month was very wet.

Horsham, Pa.—A heavy thunder-storm 30th; for ten days sultry and damp.

Plymouth Meeting, Pa.—Thermometer 80° and above, twenty-two days; rain every day 23d to 30th, eight days. Summer mean 72°.2; rain-fall 17.06 inches.

Factoryville, Pa.—A hazy month, 2°.5 warmer than average of seven years.

Carlisle, Pa.—Thunder-storm, 4 inches rain in two hours, 7th; many meteors 11th; hottest day 16th. Too much rain for farmers.

York Sulphur Springs, Pa.—Ground dry for three months 8th; streams very low 20th.

Tioga, Pa.—Month favorable for farmers; the late rains seasonable.

Grampian Hills, Pa.—Severe drought 10th to 24th, then copious rains.

Greensburgh, Pa.—Severe thunder-storm, almost a tornado, 16th. Atmosphere very hazy all summer.

Fallston, Md.—Rain-fall in the year ending with this month, 41.49 inches.

Sam's Creek, Md.—Severe drought ended 25th—wells were drying up.

Capeville, Va.—Heaviest thunder-storm this season 8th; copious rains.

Hampton, Va.—Thunder-storms on seven days, violent 1st; no day entirely clear.

Surry Court-House, Va.—Warm and showery till 29th—very favorable for crops.

Mount Solon, Va.—Fruit trees lost much foliage during drought this month.

Accotink, Va.—Little thunder or rain, except in lower Maryland.

Piedmont, Va.—Run at Somerset dry 19th to 25th—first time in thirty years.

Wytheville, Va.—Rain 26th, 27th, the first of note since July 12th.

Albemarle, N. C.—Long drought to 18th; more rain 27th, 28th.

Gowdeysville, S. C.—No general rain from July 2d to 26th instant.

Berne, Ga.—Violent gale, with hard rain, 17th, 18th, and with showers 25th, doing much damage by wind and floods.

St. Mary's, Ga.—Gales, from southeast 18th, from northeast 25th, with much rain.

Huntsville, Ala.—Crops dried up to 24th, then gusts of wind and rain.

Moulton, Ala.—Warm; dry till 24th, then sufficient rain; cool 31st.

Ocala, Fla.—Tornado and pouring rains 16th, 17th, and again and worse 25th; immense destruction by wind and flood.

New Smyrna, Fla.—Most violent gale since October 23, 1865, with thunder and deluging showers, 16th, 17th, 18th, and again, and as hard, 24th, 25th.

Jacksonville, Fla.—Gales and rains of 17th, 18th, and 25th very destructive here; worse south of this; scarcely felt on Gulf coast.

Picolata, Fla.—Storms of 16th to 19th came in puffs, destroying trees, buildings, &c.

Pilatka, Fla.—Cyclone with sheets of rain (11.6 inches in forty hours) 16th, 17th, 18th; another as severe 25th. Damage to shipping, buildings, &c., cannot be estimated.

Ponchatoula, La.—Violent thunder every day, but few showers, 1st to 15th; smoky, continued rains 20th to 23d; violent storm 28th.

Brookhaven, Miss.—Cotton-picking 28th; whippoorwills silent 31st; summer dry.

Elizabethton, Tenn.—Month exceedingly dry; upland crops damaged.

Trenton, Tenn.—A dry month; weeds and rust ceased among cotton.

Washington, Ark.—Very little rain during August; crops suffering.

Westerville, Ohio.—First sufficient rain of the season 26th.

North Bass Island, Ohio.—Vegetation suffered severely in drought from 5th to 25th.

Hillsborough, Ohio.—Rain on eleven days, with thunder 24th, 25th.

Kenton, Ohio.—First rain from northeast (all day) in many years 25th.

Urbana, Ohio.—Warmest day of 1871 15th; mean of month 3° above average for twenty years; rain 3 inches above August average.

Bethel, Ohio.—Great damaging hail three miles south 1st; a good needed rain 25th.

Jacksonburgh, Ohio.—Martins leave 6th; light frost 31st.

Cincinnati, Ohio.—Terrific thunder-storms, an inch rain in thirty minutes, 7th, and 1.5 inches, in an hour 11th; a heavy one also on the 8th.

College Hill, Ohio.—Thunder-storm, 3.25 inches rain fell in two hours, 11th.

Detroit, Mich.—Hottest day of season 15th; hazy and smoky 9th to 26th. Drought, on uplands earth dry 3 feet down, many wells dry, up to 25th.

Alpena, Mich.—Auroras 11th, 12th, 23d. Many smoky days.

Litchfield, Mich.—Auroras 9th to 12th, 17th. Very dry; no frost yet.

Northport, Mich.—Dryest season known here; trees losing foliage.

Copper Falls, Mich.—Auroras 23d, 24th; heavy rain (3.3 inches) 28th, 29th.

Rising Sun, Ind.—Slight frost, first this fall, 31st.

Vevay, Ind.—Except thunder-storm 7th, dry till rains 25th, 28th, 29th.

Beech Grove, Ind.—Rain scarce since May, 1870, till 28th inst.

Mattoon, Ill.—Very dry 1st to 8th, but little rain afterward; cool nights.

Louisville, Ill.—Locusts 2d; first light frost 31st.

Hennepin, Ill.—Month hot, windy, and only slight rain till 28th.

Belvidere, Ill.—No rain 10th to 22d; slight rains to close; hot to 29th.

Manchester, Ill.—Few rains and slight; drought severe; wells nearly dry.

Andalusia, Ill.—Light frost in low places, no damage, 31st.

Milwaukee, Wis.—Almost tornadoes at 12.30 and 9.30 p. m. of 7th.

Embarrass, Wis.—Most thunder-storms this summer from northwest, bringing cold weather—almost frosts.

Minneapolis, Minn.—First frost, slight, 31st. Month 2° above last year's.

Guttenberg, Iowa.—Thunder-showers and hail 7th, 22d; first rain this summer to soak the ground 25th. Thrashing done, plowing begun.

Independence, Iowa.—First day hot, (105°,) last day frost; dry month.

Rockford, Iowa.—Thunder-storms 2d, 3d, 13th; light frost 31st.

Ames, Iowa.—Tornado 3d; aurora 16th; frost in low lands 31st.

Algona, Iowa.—Warm month, best corn season known here.

Boonesborough, Iowa.—August average of eighteen years 67°—this 71°. Frost 31st.

St. Louis, Mo.—Violent gale, terrific lightning and thunder, and heavy rain 8th.

Hematite, Mo.—June, July, and August have been excessively hot and dry.

Rolla, Mo.—Heavy thunder-storms 3d, 16th, 22d, 23d, with gale 28th.

Cave Spring, Mo.—Gale, thunder-storm, 27th. Month dry, streams very low.

Oregon, Mo.—Great thunder-storm, heaviest rain since July 21th, 1868; many meteors 10th, 11th, 12th; fire needed 26th to 30th. Great storms frequent near here.

Atchison, Kan.—Brilliant aurora 16th; light frost on low lands 30th.

Paola, Kan.—Month began very wet, but ended very dry, springs failing.

Holton, Kan.—A warm and dry month, splendid for harvesting, thrashing, &c.

Omaha Agency, Neb.—A dry, pleasant month; most nights cool.

Deer Lodge City, Mont. Ter.—New snow on mountains 12th; first killing frost 22d.

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